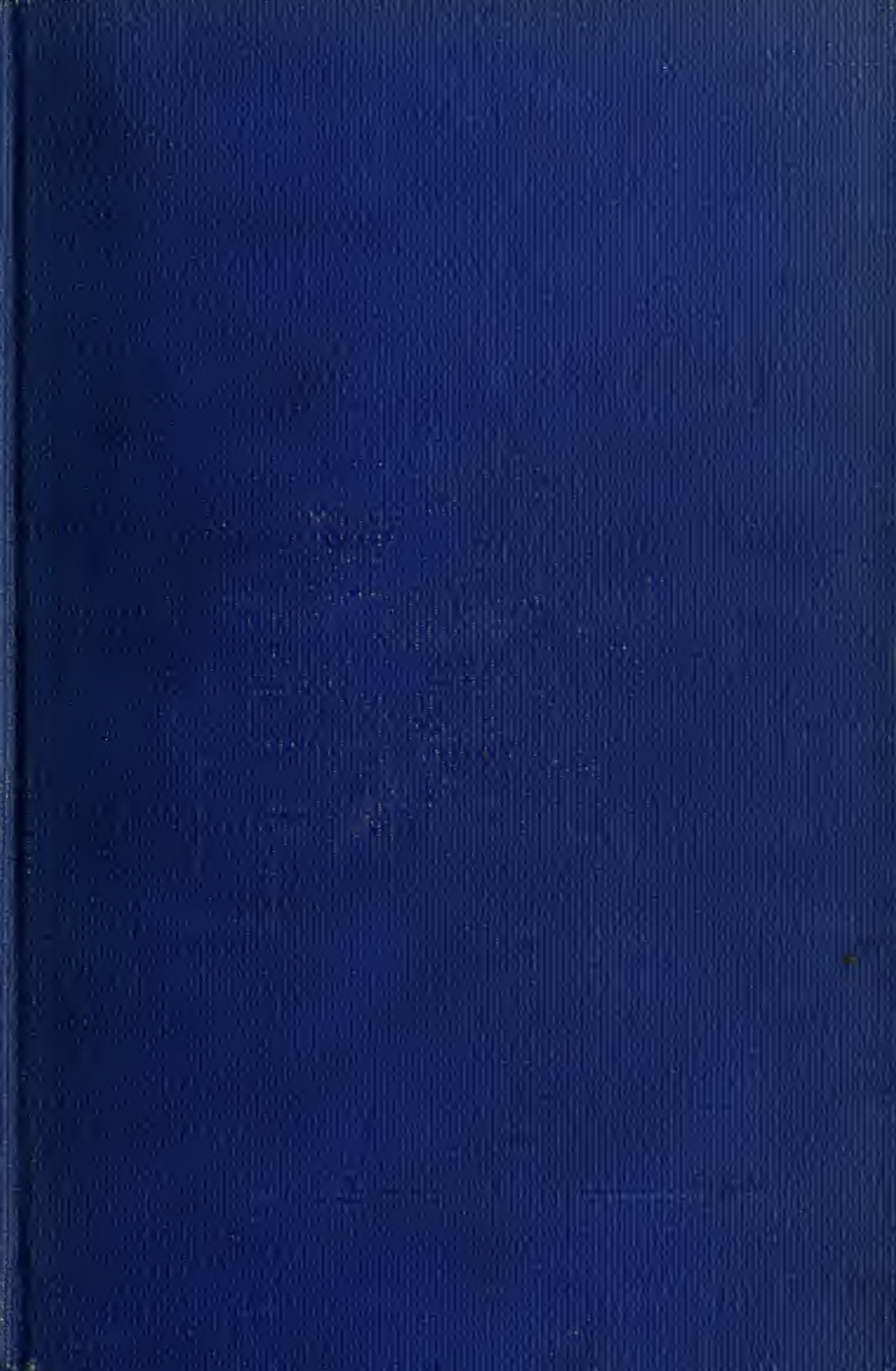




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College of Physicians and Surgeons



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Columbia College
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PART III

COLLEGE OF
PHYSICIANS AND SURGEONS
CIRCULAR OF INFORMATION
1891-92

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and Nervous System.

GEORGE S. HUNTINGTON, M.D.,
Professor of Anatomy.

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Urinary Diseases.

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Director of the Laboratories of
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Bacteriology.

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FRANK HARTLEY, M.D., Instructor in Operative Surgery and Clinical Lecturer upon Surgery.	ERVIN A. TUCKER, M.D., Instructor in Practical Obstetrics.
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TIMOTHY M. CHEESMAN, M.D., Assistant in Bacteriology.	JOSEPH A. DEGHIÉE, Ph.B., Assistant Demonstrator of Chem- istry and Physics.
JOHN S. ELY, M.D., Assistant in Pathology, and Assistant Curator of the Mu- seum.	

CLINICAL INSTRUCTORS AT THE VANDERBILT CLINIC.

CHIEFS OF CLINIC.

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D. BRYSON DELAVAN, M.D.	HERSEY G. LOCKE, M.D.
JAMES R. HAYDEN, M.D.	CHARLES H. MAY, M.D.
FRANCIS HUBER, M.D.	FREDERICK PETERSON, M.D.
FRANK W. JACKSON, M.D.	HUNTINGTON RICHARDS, M.D.

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WILLIAM L. CULBERT, M.D.	GEORGE R. NEWBY, M.D.
CHARLES N. DOWD, M.D.	WILLIAM H. PARK, M.D.
ELLSWORTH ELIOT, Jr., M.D.	CHARLES C. RANSOM, M.D.
WILLIAM C. GILLEY, M.D.	GEORGE A. RICHARDS, M.D.
ROBERT H. GREENE, M.D.	JOHN F. RIDLON, M.D.
CALVIN L. HARRISON, M.D.	NATHAN S. ROBERTS, M.D.
EDMUND Y. HILL, M.D.	EDWARD V. SILVER, M.D.
URBAN G. HITCHCOCK, M.D.	WILLIAM K. SIMPSON, M.D.
WARD A. HOLDEN, M.D.	WILLIAM J. SWIFT, M.D.
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SAMUEL W. LAMBERT, M.D.	WALTER C. WOOD, M.D.
WALTER E. LAMBERT, L.R.C.P., S.E.	

EDWARD THOMAS BOAG,
Clerk of the College.

ANNOUNCEMENT FOR 1891-92.

The College of Physicians and Surgeons, on July 1st, 1891, became, under the authority of the Legislature, a part of Columbia College and will in future be administered as such. This merger, which makes the medical department in a complete sense an integral part of the university system, promises largely to increase the usefulness of the medical school, to favor the thoroughness of scientific medical education, and to promote scientific research. The accessions to the teaching force, notably in the department of anatomy and in the physiological, pathological, and chemical laboratories permit the realization, to a degree hitherto quite impossible, of the great opportunities for instruction and research afforded by the excellence of the dissecting rooms, the laboratories, and apparatus.

The college occupies a group of buildings, given by the late William H. Vanderbilt and his family, and by William D. Sloane, Esq., which stand upon thirty contiguous lots of land, bounded on the south, west, and north by Fifty-ninth Street, Tenth Avenue, and Sixtieth Street, respectively, and lying immediately opposite to the Roosevelt Hospital.

The station, which is a few steps from the college, at the corner of Fifty-ninth Street and Ninth Avenue, is the point of union of the Ninth Avenue and Sixth Avenue Elevated Railroads, by either of which the buildings are immediately accessible from the north and south.

The "across-town" horse-cars of the Belt-line Surface Railway move east and west along Fifty-ninth Street, pass the site of the college, and place it in easy communication with the Second and Third Avenue Elevated roads, and with the numerous lines of horse-cars which reach Fifty-ninth Street from the north and south. All important points in the city, including the various hospitals, can thus readily be reached from the college without a walk of any length.

The buildings appertaining to the college are three in number,

THE COLLEGE BUILDING PROPER ;

THE VANDERBILT CLINIC ;

THE SLOANE MATERNITY HOSPITAL.

THE COLLEGE BUILDING PROPER has been designed to facilitate that combination of didactic instruction with laboratory work which is essential to a modern scientific training. It consists of a *southern portion*, measuring 140 feet by 43 feet, extending along Fifty-ninth Street ; of a *northern portion*, 96 feet by 43 feet, extending along Sixtieth Street ; and of a *middle portion*, 96 feet by 55 feet, connecting the other two. The total area covered is therefore 15,428 feet. The form of the building, and the size and height of the windows, secure abundant daylight in all the rooms, most of which, moreover, possess the electric light. Each story above the basement of the northern and southern portions has been built "in the clear," and contains neither brick partitions nor iron columns. It is therefore possible to remodel the interior at any future time.

VANDERBILT CLINIC.

THE VANDERBILT CLINIC is upon the land given to the college at the corner of Sixtieth Street and Tenth Avenue, and is connected with the college building proper by a covered way.

This institution, which has been built and endowed by the sons of the late William H. Vanderbilt as a memorial of their father, provides a fully equipped dispensary service for the sick poor ; and for the college, whose professors have entire charge of its practice, a field for extended and practical clinical instruction and research in all branches.

Besides its *dispensary department*, the building contains numerous *small rooms* for the direct practical teaching of diagnosis and treatment to groups of learners, and a *theatre*, for clinical lectures, which accommodates an audience of nearly four hundred. During the year 1890, 120,000 patients were treated at this institution.

SLOANE MATERNITY HOSPITAL.

THE SLOANE MATERNITY HOSPITAL is upon the college land at the corner of Fifty-ninth Street and Tenth Avenue.

This is a lying-in hospital of thirty-nine beds, given by William D. Sloane, Esq., whose wife, a daughter of the late

William H. Vanderbilt, has endowed the institution by making all of its beds free in perpetuity.

The obstetric service here is under the exclusive direction of the professors of Midwifery at the college, the instructor in Obstetrics being the Resident Physician. The members of the graduating class are required each to attend, in the hospital, a certain number of cases of labor.

The students of the third year are divided, at the beginning of the term, into sections of six, each section remaining on duty for one week; during this time they are furnished with rooms in the dormitory free of charge. These lodgings are upon the college grounds, and connected with the hospital by electric wires, so that students are quickly summoned to emergency cases. Bedside instruction is given during the week by the Resident Physician, and at its close an examination is held in the hospital by the adjunct professor of Obstetrics, on the work of the week.

From the time of the opening of the hospital to May, 1891, a period of three years and four months, 1,250 deliveries have taken place. These, with their proper proportion of obstetric operations and with the subsequent treatment of women and infants, have afforded invaluable bedside experience, such as is offered at no other medical school in this country.

ADMISSION.

I.—Applicants for matriculation who declare themselves in writing not to be candidates for the degree of doctor in medicine from this college are admitted, without further formality, to matriculation as special students. Such applicants cannot subsequently become candidates for graduation at this college without full compliance with the terms of admission and graduation as set forth in this catalogue.

II.—Applicants for first matriculation, who are candidates for the degree of M.D., and *who present satisfactory certificates that they had begun the study of medicine, either at a "regular" medical school or with a preceptor, before June 13, 1889*, must either

A. Comply with the requirements set forth under § III.

B. Present *to the Secretary of the Faculty*, before their first matriculation, certificates of having been successful at examinations for admission to the School of Arts or School of Mines of Columbia College; or

C. Present *to the Secretary of the Faculty*, before their first matriculation, diplomas or certificates of graduation in

Arts, Philosophy, Science, or Medicine, from recognized colleges or schools of science.

III.—To all persons who did not begin the study of medicine before June 13, 1889, and who matriculate with the intention of becoming candidates for the degree of doctor in medicine, *at any medical school in the State of New York*, the following law *approved June 13, 1889*, and amended in June, 1890, now applies, viz.:

LAWS OF 1889, CHAP. 468, AS AMENDED BY LAWS OF 1890, CHAP. 499.

To provide for the preliminary education of medical students.

§ 1. Before the Regents of the University of the State of New York or the trustees of any medical school or college within this State shall confer the degree of doctor of medicine on any person, they shall require him to file with the secretary or recording officer of their university or college, a certificate signed by the secretary of the University of the State of New York showing either that he possesses the degree of bachelor or master of arts, of bachelor or master of science, or of bachelor or doctor of philosophy, received by him from a college or university duly authorized to confer the same, or that during or prior to the first year of his medical study within this State, he passed an examination conducted under the authority of the Regents of the University of the State of New York, or by the faculty of a medical school or college entitled to confer the degree of doctor of medicine, in accordance with the standard and rules of the said Regents in arithmetic, grammar, geography, orthography, American history, English composition, and the elements of natural philosophy; or in their substantial equivalents approved by the said Regents, or that he possessed qualifications which the Regents considered and accepted as fully equivalent to the above named qualifications.

§ 2. This act shall not apply to persons who have already entered upon the prescribed three years' study of medicine, nor shall it alter the time of study or the courses of medical instruction required to be pursued in the medical colleges of this State by existing statutes.

Every person to whom this act applies, must, in pursuance thereof, before he can be admitted to final examination for the degree of M.D., file with the Secretary of the Faculty a MEDICAL STUDENT'S CERTIFICATE OF THE REGENTS OF THE UNIVERSITY OF THE STATE OF NEW YORK.

The conditions to be fulfilled in order to obtain this certificate are as follows:

A.—CERTIFICATES WITHOUT EXAMINATIONS.

Candidates for a medical student's certificate having the degree of bachelor or master of arts, of bachelor or master of sciences, or of bachelor or doctor of philosophy, received from a college or university duly authorized to confer the same; or having credentials which can be accepted in place of an examination under the act, must send their credentials to "UNIVERSITY EXAMINATIONS DEPARTMENT, ALBANY, N. Y." They will be examined and returned at once, and if accepted, a medical student's certificate will be sent with them. If the certificate be delayed for verification of the candidate, when issued, it will be dated from receipt of the candidate's application, so that the candidate will lose no time.

The credentials, beside the degrees named in the act, which the Regents accept in place of an examination under the act, are as follows:

A certificate of having successfully completed a full year's course of study in any college or university under the supervision of the Regents, or registered by the Regents as maintaining a satisfactory collegiate standard; a certificate of having satisfactorily completed a three years' course in any institution under the visitation of the Regents, or registered by the Regents as maintaining a satisfactory academic standard; a Regents' diploma; pass cards issued in the Regents' examinations for eight studies, two of which have been taken from each of the groups, numbered 1, 2, 3, and 4, to be found under B; or a Regents' certificate for any ten studies taken from these groups collectively.

B.—EXAMINATIONS UNDER THE ACT.

 *N. B.—Candidates should notify the Regents' office at Albany at least ten days in advance, stating at what time, and in what studies they must be examined. They will at once be assigned the most convenient time and place.*

Any person who does not obtain a medical student's certificate without examination, according to section A, must pass the examinations named in the act, or their equivalents, as allowed by the Regents, and referred to under section A.

The times, places, and subjects of these examinations, are set forth below. *On the dates specified, examinations will be held entirely under the charge of the Regents.*

TIMES, PLACES, AND SUBJECTS OF ACADEMIC EXAMINATIONS.

		EXAMINATIONS IN			
TIMES	PLACES	Group 1, Language		Group 2, Mathe-	Group 4, History and
		Modern	Ancient	matics Group 3, Science	Social Science Group 5, Other Studies
SEPTEMBER.—The last Tues- day, Wednesday, and Thurs- day <i>i. e.</i> , 22-24	New York, Brooklyn, Albany, Syracuse, Buffalo. For law and medical stu- dents only	Spelling English, elementary composition		Arithmetic Physics	Geography English history United States history
NOVEMBER.—Monday, Tues- day, and Wednesday of Thanksgiving week <i>i. e.</i> , 23-25	New York, and about 200 academies and high schools	Reading Writing Spelling English, " composition " literature	Cesar's Comment.	Arithmetic Algebra Plane geometry Physics Physical geography Economics Physiology and hygiene	Geography English history United States history Civics Economics Book-keeping Drawing
JANUARY.—20th week from second Monday in Septem- ber <i>i. e.</i> , 25-29	New York, and about 100 academies and high schools	Reading Writing Spelling English, elementary composition " literature Course in Eng. read'g German, 1st year French, 1st year January and March	Latin, 1st year Cesar's Comment. Cicero's Orations Vergil's <i>Æneid</i> Latin comp. Greek, 1st year Xenophon's <i>Anab.</i> Homer's <i>Iliad</i> Greek comp.	Arithmetic Algebra Plane geometry Solid geometry Plane trigonometry Astronomy Physics Chemistry Geology Physical geography Botany Zoology Physiology and hygiene	Geography Greek history Roman history English history United States history Civics Economics Ethics Book-keeping Drawing
MARCH — Week beginning second Monday <i>i. e.</i> , 14-18	New York, and about 100 academies and high schools				
JUNE.—40th week from second Monday in September <i>i. e.</i> , 13-17	New York, and about 320 academies and high schools			Arithmetic, advanced Algebra, advanced Physics, advanced Chemistry, advanced	General history Psychology Drawing, advanced

CURRICULUM.

Beginning with commencement, the college year consists of a period of vacation, extending to the first Monday in October, and of an annual session of between eight and nine months, extending from the latter time to the following commencement, which is held in common with the other departments of COLUMBIA COLLEGE during the second week in June.

The session of 1891-92 will begin upon Monday, October, 5, 1891, at 9 A.M.

During the session the exercises will be suspended on the legal holidays; from 1 P.M. of the day before Thanksgiving day to the following Monday morning; from December 24th, at 1 P.M., to January 1st, inclusive; and during a vacation of a few days in the spring, the limits of which will be determined by the faculty.

The work required of the students at this college who are candidates for the degree of M.D. is distributed over three years of study, according to the curriculum set forth below.

OBLIGATORY EXERCISES OF THE REGULAR CURRICULUM.

N. B.—Certificates that all the required practical work has been performed in a manner satisfactory to the Instructors in charge must be presented prior to final examination.

FIRST YEAR.

- Didactic Lectures or Demonstrations* in: 1. Anatomy.
2. Physiology. 3. Physics and chemistry.
Practical Work in: 1. Dissection. 2. Normal histology.
3. Physiological and medical chemistry.

SECOND YEAR.

- Didactic Lectures or Demonstrations* in: 1. Anatomy.
2. Physiology. 3. Physics and Chemistry. 4. Materia Medica and Therapeutics, including Hygiene. 5. Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System. 6. Principles and Practice of Surgery. 7. Obstetrics and Gynecology.

Dissection.

- Clinics at the Vanderbilt Clinic* in: 1. General Medicine.
2. General Surgery.

- Practical Clinical Work* in: 1. General Medicine. 2. General Surgery.

THIRD YEAR.

Didactic Lectures in: 1. Materia Medica and Therapeutics, including Hygiene. 2. Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System. 3. Principles and Practice of Surgery. 4. Obstetrics and Gynecology. 5. Ophthalmology.

Clinics at the Vanderbilt Clinic in: 1. Diseases of the Mind and Nervous System. 2. Gynecology. 3. Diseases of Children. 4. Venereal Diseases. 5. Diseases of the Skin. 6. Diseases of the Throat. 7. Diseases of the Eye. 8. Diseases of the Ear.

Practical Work in Pathology and Pathological Histology.

Practical Clinical Work in Obstetrics.

N. B.—In the eight subjects enumerated above under the head of “clinics” practical clinical work may be pursued during the third year, as an optional study, without extra charge.

GRADUATION.

For candidates for the degree of M.D., the requirements for graduation are as follows, viz. :

I.—A. Candidates who are not already graduates in medicine of recognized institutions must have pursued the regular three years' curriculum at this college; or, the regular curriculum of the second and third years at this college, and such a course at some other medical school as shall have been recognized by the faculty as an equivalent for the first year's curriculum at this college.

No course at another medical school will be so recognized which shall have begun during the same calendar year as that in which the student who shall have attended it shall have entered this college.

B. Graduates in medicine of recognized institutions must have pursued at this college at least the regular curriculum of the third year.

II.—All candidates, whether already graduates in medicine or not, must pass at this college examinations satisfactory to the Faculty in: 1. Anatomy; 2. Physiology; 3. Physics and Chemistry; 4. Materia Medica and Therapeutics, including Hygiene; 5. Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System; 6. Principles and Practice of Surgery; 7. Obstetrics and Gynecology; 8. Clinical Studies.

See section headed "EXAMINATIONS."

III.—Candidates must present satisfactory evidence of good moral character and of having attained the age of twenty-one years.

IV.—Candidates must present satisfactory evidence of having complied with the requirements for admission.

See section headed "ADMISSION."

EXAMINATIONS.

The professional examinations in all the eight branches are in writing, and are held immediately after the close of the lectures of the college year.

The examinations in the topic of "Clinical Studies" comprise one question in each of the following subjects, set by the clinical professor thereof:

1. Venereal Diseases; 2. Diseases of Children; 3. Diseases of the Eye; 4. Diseases of the Ear; 5. Diseases of the Throat; 6. Diseases of the Skin.

With the exception of such graduates in medicine as attend at this college only the third year of the curriculum, candidates, if they so elect, are eligible for examination in any or all of the three branches of: 1. Anatomy; 2. Physiology; and 3. Physics and chemistry, and upon these only, on completing the first two years of the curriculum.

Such an examination in any or all of the said three subjects, if satisfactory, is accounted final, *unless the candidate subsequently is rejected for the degree of M.D. as set forth below.*

A candidate who has been unsuccessful, at the end of his second year, at any of the three examinations above specified, is not eligible for re-examination in the branch or branches in which he has failed *until the time of his final examination for graduation.*

According to the merits of his examinations, three results of the latter are possible in the case of a candidate for the degree of M.D.:

1. He is "passed" when his examinations have been satisfactory in each and all of the eight branches of medical teaching enumerated under the head of "Graduation," § II.
2. He is "conditioned" when the average merit of his eight examinations has been satisfactory, while in one or more branches he has been found deficient. In this case the candidate can proceed to his degree only on the condition that he first pass a re-examination in the deficient branch or branches, not sooner than at the next regular examination. Candidates are not "conditioned," however, in the topic of "Clinical Studies."
3. He is "rejected" when the average merit of his eight examinations has been unsatisfactory. *In this case the candidate must be re-examined in all the eight branches.*

Final examinations for the degree of M.D. are held annually in October for the sole purpose of re-examining "rejected" or "conditioned" candidates.

A candidate who has been "rejected" twice, or more, for the degree of M.D. is thereafter eligible for re-examination only at the stated examinations held in the spring, and must pay a new matriculation fee between every two periods of re-examination.

INSTRUCTION.

The teaching at this college comprises didactic and clinical lectures and demonstrations; practical clinical instruction given to groups of students; and laboratory work.

I.—LECTURES AND DEMONSTRATIONS.

DIDACTIC LECTURES.

Didactic lectures and demonstrations, including those in which the magic lantern is used, are given by the faculty throughout the college year on the following subjects, viz.: 1. *Anatomy*. 2. *Physiology*. 3. *Physics and Chemistry*. 4. *Materia Medica, Therapeutics and Hygiene*. 5. *Obstetrics and the Diseases of Women*. 6. *Surgery*. 7. *Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System*. 8. *Ophthalmology*.

CARTWRIGHT LECTURES OF THE ALUMNI ASSOCIATION.—According to the provisions of the Cartwright Trust, there is biennially given, under the auspices of the Alumni Association, a course of lectures more especially addressed to graduates in medicine. This course was delivered, during the session of 1889-90, by JOHN S. BILLINGS, M.D., LL.D., Surgeon U. S. Army, upon *Vital and Medical Statistics*.

CLINICS.

Eleven clinics are given each week at the VANDERBILT CLINIC, as follows:

Surgical.—Professors Bull and McBurney; Mondays, 12 M.
Diseases of the Ear.—Professor Buck; Mondays, 2 P.M.
Diseases of the Skin.—Professor Fox; Mondays, 3 P.M.
Diseases of the Throat (with laryngoscopic demonstrations).—Professor Lefferts; Tuesdays, 2 P.M.
Diseases of the Eye.—Professor Knapp; Tuesdays, 3 P.M.
Diseases of Children.—Professor Jacobi; Wednesdays, 2:30 P.M.

Venereal Diseases.—Professor Taylor; Thursdays, 2 P.M.

Medical.—Professor Delafield; Thursdays, 3 P.M.

Surgical.—Professor Weir; Fridays, 12 M.

Diseases of the Mind and Nervous System.—Professor Starr; Fridays, 2 P.M.

Diseases of Women.—Professor Tuttle; Fridays, 3 P.M.

HOSPITAL CLINICS.

Beside the college clinics, the general and special hospitals of New York afford most important fields for clinical teaching. This college is strongly represented on the staffs of these institutions, and regular clinical instruction at hospitals is made a prominent feature of the curriculum. *Admission is free* to all matriculated students. At all the following hospitals instruction is given by officers of the college.

SLOANE MATERNITY HOSPITAL, corner of Fifty-ninth Street and Tenth Avenue.—See page 5.

ROOSEVELT HOSPITAL.—This has long been the seat of thorough clinical work, and has become of special importance in this respect from its position immediately opposite the new buildings of the college upon Fifty-ninth Street, between Ninth and Tenth Avenues. Moreover, this hospital has lately received a bequest of several hundred thousand dollars, for the erection and endowment of a new surgical operating theatre, which will be opened about October 1, 1891, and which is expected to offer unrivalled facilities for instruction in this department.

The Roosevelt is a general hospital of one hundred and eighty beds, and it also possesses a flourishing out-patient department.

Public clinics are given here as follows, throughout the college session :

Medical.—Mondays, at 4 P.M., Professors Delafield and Draper, and Dr. Roosevelt. Throughout the session the same gentlemen will give instruction to the class in sections in the Hospital Wards.

Surgical.—Saturdays, at 2:30 P.M., Professor McBurney.

Gynecological.—Every week day except Friday, at 2:30 P.M., Professor Tuttle. Admission, by invitation, to operations.

NEW YORK HOSPITAL, Fifteenth Street, between Fifth and Sixth Avenues.—Reached from the college by taking the Sixth Avenue Elevated Railroad at the corner of Ninth Avenue and Fifty-ninth Street, and leaving the cars at the corner of Fourteenth Street and Sixth Avenue.

This is a general hospital of the highest class, of one hundred and fifty beds, with an out-patient department.

The public clinics are the—

Medical.—Mondays and Thursdays, at 2:30 P.M., Professors Peabody and Partridge.

Surgical.—Thursdays, 2:30 P.M., Professor Markoe; Wednesdays and Saturdays, 2:30 P.M., Professors Weir and Bull.

BELLEVUE HOSPITAL, Twenty-sixth Street and East River,—Directly accessible from the college by the horse-cars of the Belt Line, which run from the door of the college to that of the hospital; or, by leaving the horse-car at the corner of Fifty-ninth Street and Third Avenue, and taking the Third Avenue Elevated train to the corner of Third Avenue and Twenty-eighth Street.

The service of this hospital and of its out-patient department covers a great range of practice.

The following clinics are held here throughout the session :

Medical.—Tuesdays, 1:30 P.M., Professors Jacobi and Peabody, and Drs. Roosevelt and James.

Surgical.—Thursdays, 2:30 P.M., Drs. Hartley, F. H. Markoe, and Gallaudet.

Diseases of Children.—Mondays, 2:30 P.M., from April to June, Professor Jacobi.

CHARITY HOSPITAL, Blackwell's Island, East River.—To reach this institution the steamer should be taken at the foot of East Fifty-second Street. This hospital offers a peculiarly rich field for the study of venereal diseases, over two thousand such cases being received yearly. Professor Taylor gives a clinic from October to March, inclusive, as follows :

Venereal.—Wednesdays, 2 P.M.

NEW YORK CANCER HOSPITAL, One Hundred and Sixth Street and Eighth Avenue.—Elevated Railroad station, One Hundred and Fourth Street and Ninth Avenue. Can be reached also by the Eighth Avenue surface road.

Two clinics a week are held here, viz.:

Surgical.—Mondays, 2:30 P.M., Dr. Hartley; Thursdays, 2:30 P.M., Dr. B. F. Curtis.

NEW YORK OPHTHALMIC AND AURAL INSTITUTE, 46 East Twelfth Street.—Reached by the Sixth Avenue Elevated train, which should be left at the Fourteenth Street station.

This hospital has thirty beds, and a large daily dispensary

service is held for diseases of the eye and ear. Throughout the session the following clinic is held :

Ophthalmological.—Saturdays, 2:30 to 5 P.M., Professor Knapp (admission by invitation of Sections). Selected cases for diagnosis ; the most important operations on the eye.

DEMONSTRATIONS OF PATHOLOGICAL ANATOMY.

The numerous autopsies which occur at the Roosevelt, New York, Bellevue, and Charity Hospitals, during the session, take place before the students usually at regular hours, and the hospital pathologists demonstrate and explain the lesions discovered. Whenever autopsies are to occur at these institutions, timely notice is posted upon the bulletin-board of the college.

The hours for autopsies are as follows :

Roosevelt Hospital.—3 P.M., Dr. Hodenpyl.

New York Hospital.—2 P.M., Dr. Ferguson.

Bellevue Hospital.—1 P.M., Dr. Ely.

Charity Hospital.—Dr. Van Gieson.

II.—PRACTICAL CLINICAL INSTRUCTION.

One of the greatest advantages secured to the college by the founding of the Sloane Maternity Hospital and the Vanderbilt Clinic is the possibility of organizing a system of practical clinical teaching whereby each member of numerous small classes may be brought into direct personal contact with the cases under examination.

An outline is appended of the instruction proposed upon this plan, which is given by the clinical lecturers and their assistants.

GENERAL MEDICINE.—Physical diagnosis. *Required*.

GENERAL SURGERY.—Diagnosis and treatment, including minor surgery, bandaging, etc. *Required*.

MIDWIFERY.—Attendance upon cases of labor, at the Sloane Maternity Hospital, by advanced students, under the direction of the obstetricians of the hospital (see page 6). *Required*.

GYNECOLOGY.—Practical instruction in diagnosis and treatment, including the use of instruments. *Optional*.

DISEASES OF CHILDREN.—Diagnosis and treatment. *Optional*.

VENEREAL DISEASES.—Diagnosis and treatment. *Optional*.

DISEASES OF THE NERVOUS SYSTEM.—Examination of cases, including electrical tests; diagnosis and localization of lesions; electro-therapeutics. *Optional.*

DISEASES OF THE SKIN.—Diagnosis and treatment. *Optional.*

DISEASES OF THE EYE.—Diagnosis, including the tests for errors of refraction and accommodation and the use of the ophthalmoscope, and treatment. *Optional.*

DISEASES OF THE EAR.—Diagnosis and treatment. *Optional.*

DISEASES OF THE THROAT.—Diagnosis and treatment, including the use of the laryngoscope and rhinoscope. *Optional.*

III.—LABORATORY WORK.

PHYSIOLOGY.—The physiological laboratory has been fully equipped, and with the coming session will receive important accessions to its official working force. It is designed to place within the reach of a certain number of graduates, or other advanced workers, such opportunities for original research, under the direction of the professor and demonstrator, as have not until lately been attainable in New York, but are commonly sought for at European universities. The Professor and Demonstrator of Physiology are not practitioners, but devote their entire time to physiological work at the college.

The apparatus of precision required is furnished from the Swift Physiological Cabinet.

This is a collection of physiological apparatus of the latest models, by the best makers, given, together with provision for its increase, by the late James T. Swift, Esq., formerly a trustee of the Medical School, as a memorial of his brother, the late Foster Swift, M.D., a graduate of the class of 1857.

OPERATIVE SURGERY UPON THE CADAVER.—Frank Hartley, M.D., Surgeon to Bellevue and the Cancer Hospitals, and Assistant Surgeon to the Roosevelt Hospital, gives special instruction in this branch in the college building from October 15th to May 1st. All the operations that can be practised properly upon the cadaver are done in each course, by the members of the class. Class members, 6; lessons, 13 or 14, of from 1½ to 2 hours each.

ANATOMY.—Every student is required to dissect, and the unusual size and thorough equipment of the department

of practical anatomy at the new building command special attention.

The dissecting room is open all day from October 1st to May 1st, and the demonstrators are present during the mornings, afternoons, and evenings.

A valuable feature is the "BONE-ROOM," on the first floor of the college, contiguous to the students' reading-room. Here a large number of disarticulated skeletons are kept, and the separate bones are lent for study, as books are lent from a circulating library.

PHYSIOLOGICAL AND MEDICAL CHEMISTRY.—Practical instruction is given in the chemical laboratory, on four afternoons of each week, by the Demonstrator of Chemistry and Physics, Charles E. Pellew, E.M., under the direction of the Professor of Chemistry.

The laboratory is newly equipped with microscopes, as well as with spectroscopes, and the necessary chemical apparatus.

The regular instruction is limited to students of the first year, who are enrolled in two divisions. The second division has access to the chemical laboratory during the first half of the session, during which time the first division is occupied with normal histology.

During the second half of the session the first division attends in the chemical laboratory, and the second in that of normal histology.

The division in attendance on practical chemistry is subdivided into two sections, of which one works in the chemical laboratory on Tuesdays and Wednesdays, and the other on Thursdays and Fridays; in each case from 2 to 4 P.M. Special students are also received.

The instruction includes: The preparation and study of typical animal and vegetable substances, such as the carbohydrates, the fats, the proteids, and of the inorganic matters of most importance, including the commonest acids, bases, and salts; distillation; fermentation; artificial digestion; the sanitary analysis of drinking water; and the properties of blood, milk, bile.

The last portion of the course is devoted to the microscopical and chemical examination of urine. Quantitative methods are taught in this as far as practicable, and the students are required to examine carefully numerous samples of pathological urines collected from the various hospitals and clinics in the city.

The microscope is brought into use wherever of value in connection with chemical work.

A special optional course (free) of some twenty-five lectures on medical chemistry is given by the Demonstrator to each division of the class. These lectures include discussions of the composition, occurrence, preparation, properties, and uses of the various substances experimented on, and also full and detailed descriptions of the different tests made in the laboratory.

THE LABORATORY OF NORMAL HISTOLOGY, PATHOLOGICAL ANATOMY AND HISTOLOGY, AND BACTERIOLOGY, founded in 1878 by the Alumni Association of this college, now occupies, with its various departments, two floors of the northern part of the new college building.

Systematic practical instruction in pathological anatomy and histology and bacteriology is given to third-year students, by Dr. T. Mitchell Prudden, director of the laboratory, assisted by Drs. Eugene Hodenpyl and John Slade Ely, on Mondays, Fridays, and Saturdays, from 9 to 11 A.M. The first division of the class will receive this instruction during the first half of the session; the second division during the last half.

Instruction in normal histology is given by Dr. George C. Freeborn, assisted by Drs. Ira T. Van Gieson and J. B. Lynch. This course is arranged for first-year students. During the first half of the session, the first division of the class will meet from 2 to 4 P.M. on Tuesdays, Wednesdays, Thursdays, and Fridays. During the second half of the session, the second division of the class will meet at the same hours.

In the above courses the student is taught the methods of preparing and studying normal and diseased tissues and organs, and makes for his own future use collections of microscopical specimens, from which he prepares in the laboratory a series of outline sketches. Microscopes and reagents are furnished by the laboratory.

A special course is given, by Dr. Freeborn, in microscopical technology.

Special practical instruction is given by Dr. Van Gieson in the normal and pathological histology of the nervous system and the eye.

Abundant opportunity is afforded to practitioners of medicine and others to make special studies or original investigations in experimental pathology, bacteriology, and other themes taught in the laboratory. To the special workers the laboratory is open at all hours of the day.

TEXT-BOOKS AND INSTRUMENTS.

The following list comprises the text-books and instruments recommended.

For the convenience of those who wish to reckon up their expenses in advance, there are appended the lowest prices at which the books, in cloth bindings, can be purchased in New York, on May 31, 1891. These prices are liable to fluctuations. As a rule, the latest editions only of text-books should be purchased.

Gray's Anatomy, \$4.80; *or* Quain's Anatomy, \$9.60; Kirkes' Physiology, \$3.20; Fownes' Chemistry, \$2.20; Ganot's Physics, \$4; H. C. Wood's Therapeutics, \$4.80; E. Curtis' General Medicinal Technology, 80 cents; Druitt's Surgeon's Vade Mecum, \$3.20; Playfair's Midwifery, \$3.20; *or* Lusk's Midwifery, \$4; Hart and Barbour's Manual of Gynecology, \$5.60; Flint's Practice, \$4.40; Delafield and Prudden's Pathological Anatomy and Histology, \$4.40; Prudden's Normal Histology, \$1; Asby and Wright on the Diseases of Children, \$4.80; Bumstead and Taylor on Venereal Diseases, \$3.80; Swanzy's Hand-book of Diseases of the Eye, \$2.40; Buck's Manual of Diseases of the Ear, \$2; Van Harlingen's Hand-book of Skin Diseases, \$2; Mackenzie on Diseases of the Throat and Nose, new edition preparing; Gowers' Diseases of the Nervous System, \$5.20.

A "dissecting case," containing all the necessary instruments, can be bought for from \$3.00 to \$4.00.

EXPENSES.

ALL FEES ARE PAYABLE IN ADVANCE.

N. B.—For all students of the new curriculum who matriculated for the first time prior to January 1, 1890, the fee for all the required exercises of the year is \$150.

The necessary expenses for graduation at this college, for a student who attends the curriculum during three years, are as follows :

FIRST YEAR.

Matriculation	\$ 5
Fee for all the required exercises of the year	200
Anatomical material, \$1 each part.	

SECOND YEAR.

Matriculation	\$ 5
Fee for all the required exercises of the year	200
Anatomical material, \$1 each part	

THIRD YEAR.

Matriculation	\$ 5
Fee for all the required exercises of the year	200
Graduation fee	30

Practical clinical work in eight subjects, optional and free, to all students of the third year of the new curriculum.

FEES FOR SPECIAL STUDENTS.

Didactic lectures from each of the numbered seven chairs first enumerated under the head of "Instruction"	\$20
Dissection	10
Dissecting material, per "part"	1

Practical chemistry, including chemicals and breakage, per course	\$25
Laboratory course in normal histology, including materials	25
Laboratory course in pathology and pathological histology, including materials	25
Laboratory fee for special instruction in pathology or histology or bacteriology, per month	25
Operative surgery on the cadaver, including material, per course	20

For other special courses the fees must be specially arranged for with the instructors.

The clinical lectures at the VANDERBILT CLINIC are free to matriculates who do not take the regular curriculum.

The public clinical lectures, and demonstrations of pathological anatomy, which are given at the hospitals by officers of the college, are free to all matriculates.

BOARD.

Board can be obtained at prices ranging from five to nine dollars a week.

Students are requested, on their arrival in the city, to call at the college and register their names with the clerk of the college, Mr. Boag, who will give them all necessary information and aid them in obtaining board.

CORRESPONDENCE.

Letters requesting information should be addressed to George M. Tuttle, M.D., Secretary of the Faculty, College of Physicians and Surgeons, 437 West Fifty-ninth Street, New York.

HOSPITAL APPOINTMENTS.

By a resolution of the Commissioners of Public Charities and Correction, the faculty of this college is entitled to nominate for appointment by the commissioners, after competitive examination in the college, its proportion of members of the house staff of Bellevue Hospital; such members to be attached to that division of the said hospital which has been assigned to the care of the college.

These nominees all serve the hospital for six months in each of the three grades of junior assistant, senior assistant,

and house physician or house surgeon; each one having thus a total of eighteen months' experience on the "House Staff."

Four nominations, two medical and two surgical, are made each year by the college from among its graduates under the above resolution.

One medical and one surgical assistant go on duty upon July 1st; one medical and one surgical assistant upon January 1st.

The choice as to character of service, and the time of beginning the same, is given to the successful candidates in the order of their merit.

Similar positions are filled twice in each year, by public competitive examination, open to graduates of this college, in the following institutions:

The "non-collegiate" division of Bellevue Hospital; the New York Hospital; the Roosevelt Hospital; St. Luke's Hospital; Charity Hospital; St. Vincent's Hospital; St. Francis' Hospital; the German Hospital; the Mount Sinai Hospital; the Presbyterian Hospital; the Woman's Hospital; the Brooklyn Hospital; St. Catharine's Hospital, Brooklyn; St. Peter's Hospital, Brooklyn; the Kings County Hospital, Flatbush, L. I.

ALONZO CLARK SCHOLARSHIP.

By the will of the late Alonzo Clark, M.D., LL.D., for many years president of the college, and professor of pathology and practical medicine, it has been placed in the power of the faculty to bestow a scholarship, with an income of about nine hundred dollars a year, for the purpose of promoting the discovery of new facts in medical science.

This has been bestowed for the past year upon T. Mitchell Prudden, M.D., of New York City.

PRIZES.

ALL PRIZES ARE PUBLICLY AWARDED AT THE COLLEGE COMMENCEMENT.

HARSEN PRIZES FOR CLINICAL REPORTS.

Founded in 1859, by the late Jacob Harsen, M.D., a graduate of the college.

Three annual prizes are offered for the three best reports, in writing, by students of the College of Physicians and Surgeons, of the clinical instruction given at the New York Hospital during any four consecutive months of the year which ends on commencement day.

These reports must embrace the clinical teaching of both the visiting physician and the visiting surgeon on duty.

The prizes are as follows:

A First Prize of one hundred and fifty dollars; a Second Prize of seventy-five dollars; a Third Prize of twenty-five dollars.

A "Harsen Prize Medal" and a diploma are given with each prize.

HARSEN PRIZES FOR PROFICIENCY AT EXAMINATION.

In consequence of the great increase in value of the Harsen Prize Fund, in addition to the three prizes above mentioned, there are awarded three

HARSEN PRIZES FOR PROFICIENCY AT EXAMINATION, VIZ.:

A First Prize of five hundred dollars; a Second Prize of three hundred dollars; a Third Prize of two hundred dollars.

The award of these prizes is made as follows:

The ten members of each graduating class who, at their examination for the degree of Doctor in Medicine, have shown the highest proficiency in all the branches combined,

receive each a diploma of "Examination Honors," and are entitled to take part in special competitive examinations, the three most meritorious competitors at which receive the first, second, and third prizes, respectively.

The competitive examinations consist:

I. Of an examination in writing, covering *all the seven branches* of medical teaching.

II. Of an examination upon the cadaver in *practical anatomy*, conducted by the Professor of Anatomy.

III. Of practical examinations in *clinical medicine* and *clinical surgery*, conducted at the hospitals by the professors of medicine and surgery respectively.

The relative merits of the competitors, are decided and the award of the prizes made, by a committee of three judges, consisting of the president of the college, the presidents of the Association of the Alumni, and a resident alumnus selected by them.

FELLOWSHIPS OF THE ALUMNI ASSOCIATION.

In June, 1891, the trustees, at the request of the Alumni Association of the College of Physicians and Surgeons, established three fellowships to be known as the Fellowships of the Alumni Association of the College of Physicians and Surgeons, the provision for which is made annually by the Association.

These fellowships are open to graduates of the College of Physicians and Surgeons who have shown special aptitude for scientific research in the departments of anatomy, physiology or pathology. They are to be held for a period of two years and have an annual value of five hundred dollars each. The appointments to these fellowships are to be made by the executive committee of the Alumni Association from candidates who may be presented to them by the professor of anatomy, the professor of physiology and the director of the pathological laboratory.

The persons appointed to these fellowships are expected to devote themselves to scientific research in the department which they may elect, in this country, either in the schools of Columbia College, where they will enjoy free tuition and the privileges of the laboratories, or in other institutions at their own expense. At the end of two years the holders of these fellowships will be expected to present to the Association a thesis containing evidence of independent or original work in their special department. The appoint-

ments to these fellowships will be made for the first time in May, 1892.

The names of the successful candidates for these fellowships will be announced at the commencement following their appointment, and will be published in the annual catalogue. The payments on account of the fellowships will be made by the treasurer of Columbia College according to the rules adopted in other fellowships.

ALUMNI ASSOCIATION PRIZE.

This is a biennial prize of *five hundred dollars* open for competition to the alumni of the college. It is awarded for the best medical essay submitted upon any subject the writer may select, and is open to competition in alternate years with the Cartwright prize.

If no one of the competing essays be deemed sufficiently meritorious, the prize is not awarded.

An essay, in order to be held worthy of the prize, must contain the results of original investigations made by the writer.

This prize is not awarded to any essay which is the work of more than one author, or which is at the same time submitted for another prize.

Each competitor is required to send with his essay to the Prize Committee a statement that these requirements have been complied with.

Essays in competition for the prize to be awarded at commencement, 1892, must be sent to the secretary of the Alumni Association on or before April 1, 1892.

Competing essays must each be marked with a device or motto, and accompanied by a sealed envelope, similarly marked, containing the name and address of the author.

CARTWRIGHT PRIZE OF THE ALUMNI ASSOCIATION.

The prize consists of *five hundred dollars*, and is offered for competition in alternate years with the Alumni Association prize.

It is awarded on the same terms as the latter, *except that it is open to universal competition.*

STEVENS TRIENNIAL PRIZE.

Established by the late Alexander Hodgdon Stevens, M.D., formerly president of the college, on the following plan:

The prize, awarded triennially, consists of the interest

yielded by the principal fund during three years, and amounts to *two hundred dollars*.

The administration of the prize is entrusted to a commission, consisting of the president of the College of Physicians and Surgeons (*ex-officio*), the president of the Alumni Association (*ex-officio*), and the professor of physiology (*ex-officio*) in the same institution.

The prize is awarded to no essay unless it include the results of original research by the writer upon the subject chosen.

In 1894 this prize will be given to the *best medical essay* submitted, upon any subject the writer may select.

The competing essays must be sent in to the president of the College of Physicians and Surgeons, New York, on or before the first day of January, 1894. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope, bearing the same device or motto, and containing the name and address of the author. The envelope belonging to the successful essay will be opened, and the name of the author announced, at the annual commencement of the college in 1894; at which time, also, the subjects for the next triennial prize (1897) will be announced.

This prize is open for universal competition.

JOSEPH MATHER SMITH PRIZE.

The fund for this prize is given by the relatives, friends, and pupils of the late Dr. Smith, as a memorial of his services as professor in the college from 1826 to 1866. Under the provisions of the trust, an annual prize of *one hundred dollars* is awarded for the best essay (if sufficiently meritorious) on the subject of the year, presented by an alumnus of this college. The prize committee, consisting of the president of the college, the professor of pathology and practical medicine, and the president of the Alumni Association, designate each year the subject for the following year. The competing essays should be sent to the president of the college on or before March 10th, each essay signed with a device or motto, and accompanied by a sealed envelope, inscribed with the same device or motto, and containing the name of the author. The envelope of the successful essayist will be opened, and the prize awarded at the annual commencement next following.

An essay in competition for the prize to be awarded in 1892 may be upon any subject relating to hygiene, pathology, or practical medicine.



Columbia College
in the City of New York

PART III.

COLLEGE OF
PHYSICIANS AND SURGEONS

REGISTER OF STUDENTS

1891-92

CIRCULAR OF INFORMATION

1892-93

2-8-'92-30,000

TRUSTEES.

HAMILTON FISH, LL.D.,
Chairman.

JOHN B. PINE,
Clerk.

HAMILTON FISH, LL.D.	W. BAYARD CUTTING.
WILLIAM C. SCHERMERHORN.	TALBOT W. CHAMBERS, S.T.D.
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SAMUEL BLATCHFORD, LL.D.	GEORGE L. RIVES.
STEPHEN P. NASH, LL.D.	LENOX SMITH.
JOSEPH W. HARPER.	JOHN CROSBY BROWN.
CHARLES A. SILLIMAN.	HENRY C. POTTER, D.D., LL.D. (Cantab.).
FREDERICK A. SCHERMERHORN.	WILLIAM H. DRAPER, M.D.
GERARD BEEKMAN.	MARVIN R. VINCENT, S.T.D.
ABRAM N. LITTLEJOHN, D.D., LL.D. (Cantab.).	JOHN B. PINE.
EDWARD MITCHELL.	CORNELIUS VANDERBILT.

GEORGE G. WHELOCK, M.D.

TREASURER.

JOHN McLEAN NASH 67 Wall Street.

UNIVERSITY FACULTY OF MEDICINE.

SETH LOW, LL.D., *President.*

JAMES W. McLANE, M.D.....	51 W. 38th St.
Dean of the Faculty, Professor of Obstetrics.	
THOMAS M. MARKOE, M.D.....	20 W. 30th St.
Emeritus Professor of Surgery.	
WILLIAM DETMOLD, M.D.....	38 E. 9th St.
Emeritus Professor of Clinical and Military Surgery.	
T. GAILLARD THOMAS, M.D.....	600 Madison Ave.
Emeritus Professor of Obstetrics and Gynecology.	
JOHN T. METCALFE, M.D.....	149 W. 57th St.
Emeritus Professor of Clinical Medicine.	
CHARLES F. CHANDLER, Ph.D.....	51 E. 54th St.
Professor of Chemistry and Medical Jurisprudence.	
EDWARD CURTIS, M.D.....	120 Broadway.
Emeritus Professor of Materia Medica and Therapeutics.	
FRANCIS DELAFIELD, M.D.....	12 W. 32d St.
Professor of Pathology and Practical Medicine.	
JOHN G. CURTIS, M.D.....	127 E. 35th St.
Professor of Physiology.	
GEORGE M. TUTTLE, M.D.....	49 W. 38th St.
Professor of Gynecology, Secretary of the Faculty.	
GEORGE L. PEABODY, M.D.....	57 W. 38th St.
Professor of Materia Medica and Therapeutics.	
WILLIAM T. BULL, M.D.....	35 W. 35th St.
Professor of Surgery.	
CHARLES MCBURNEY, M.D.....	40 W. 36th St.
Professor of Surgery.	
EDWARD L. PARTRIDGE, M.D.....	19 Fifth Ave.
Adjunct Professor of Obstetrics.	
M. ALLEN STARR, M.D.....	22 W. 48th St.
Professor of Diseases of the Mind and Nervous System.	
GEORGE S. HUNTINGTON, M.D.....	50 E. 73d St.
Professor of Anatomy.	

OTHER OFFICERS.

WILLIAM H. DRAPER, M.D.....	19	E. 47th St.	Professor of Clinical Medicine.
ABRAHAM JACOBI, M.D.....	110	W. 34th St.	Clinical Professor of the Diseases of Children.
FESSENDEN N. OTIS, M.D.....	5	W. 50th St.	Emeritus Professor of Genito-Urinary Diseases.
GEORGE M. LEFFERTS, M.D.....	6	W. 33d St.	Clinical Professor of Laryngoscopy and Diseases of the Throat.
GEORGE H. FOX, M.D.....	18	E. 31st St.	Clinical Professor of Diseases of the Skin.
T. MITCHELL PRUDDEN, M.D.....	23	W. 33d St.	Director of the Laboratories of Histology, Pathology, and Bacteriology.
ROBERT F. WEIR, M.D.....	37	W. 33d St.	Clinical Professor of Surgery.
ALBERT H. BUCK, M.D.....	19	E. 38th St.	Clinical Professor of the Diseases of the Ear.
HERMAN KNAPP, M.D.....	25	W. 24th St.	Professor of Ophthalmology.
ROBERT W. TAYLOR, M.D.....	40	W. 21st St.	Clinical Professor of Venereal Diseases.
FRANK HARTLEY, M.D.....	7	W. 31st St.	Instructor in Operative Surgery and Clinical Lecturer upon Surgery.
J. WEST ROOSEVELT, M.D.....	32	E. 31st St.	Clinical Lecturer upon Medicine.
FRANCIS H. MARKOE, M.D.....	20	W. 30th St.	Clinical Lecturer upon Surgery.
CHARLES E. PELLEW, E.M.....	51	E. 54th St.	Demonstrator of Chemistry and Physics.
BERN B. GALLAUDET, M.D.....	136	W. 34th St.	Demonstrator of Anatomy, and Clinical Lecturer upon Surgery.
GEORGE C. FREEBORN, M.D.....	200	W. 56th St.	Instructor in Normal Histology.
IRA T. VAN GIESON, M.D.....	437	W. 59th St.	First Assistant in Normal Histology.
EUGENE HODENPYL, M.D.....	437	W. 59th St.	Assistant in Pathology.

- TIMOTHY M. CHEESMAN, M.D.....46 E. 29th St.
Assistant in Bacteriology.
- JOHN S. ELY, M.D.....147 W. 73d St.
Assistant in Pathology, and Assistant Curator of the Museum.
- WALTER B. JAMES, M.D.....33 W. 39th St.
Clinical Lecturer upon Medicine.
- JOHN B. LYNCH, M.D.....148 W. 22d St.
Second Assistant in Normal Histology.
- ERVIN A. TUCKER, M.D..... } Sloane Maternity Hospital,
Instructor in Practical Obstetrics. } 59th St. and 10th Ave.
- ELLSWORTH ELIOT, Jr., M.D.....48 W. 36th St.
Assistant Demonstrator of Anatomy.
- LUCIUS W. HOTCHKISS, M.D.....30 E. 35th St.
Assistant Demonstrator of Anatomy.
- FREDERIC S. LEE, Ph.D.....437 W. 59th St.
Demonstrator of Physiology.
- FRANKLIN DEXTER, M.D.....437 W. 59th St.
Assistant Demonstrator of Anatomy.
- FREDERICK J. BROCKWAY, M.D.....437 W. 59th St.
Assistant Demonstrator of Anatomy.
- JOSEPH A. BLAKE, M.D.....437 W. 59th St.
Assistant Demonstrator of Anatomy.
- ROBERT A. SANDS, M.D.....39 E. 33d St.
Assistant Demonstrator of Anatomy.
- JOSEPH A. DEGHUÉE, Ph.B.....437 W. 59th St.
Assistant Demonstrator of Chemistry and Physics.

CLINICAL INSTRUCTORS AT THE VANDERBILT CLINIC.

CHIEFS OF CLINIC.

WILLIAM COWEN, M.D.
B. FARQUHAR CURTIS, M.D.
D. BRYSON DELAVAN, M.D.
JAMES R. HAYDEN, M.D.
FRANCIS HUBER, M.D.

FRANK W. JACKSON, M.D.
GEORGE T. JACKSON, M.D.
HERSEY G. LOCKE, M.D.
CHARLES H. MAY, M.D.
WALTER VOUGHT, M.D.

CLINICAL ASSISTANTS.

CHARLES L. ALLEN, M.D.	WALTER E. LAMBERT, L.R.C.P.
JOSEPH D. ASPINWALL, M.D.	S.E.
J. EDWARD AUSTIN, M.D.	ROBERT LEWIS, M.D.
JOSEPH A. BLAKE, M.D.	GEORGE R. LOCKWOOD, Jr., M.D.
JOHN W. BRANNAN, M.D.	GEORGE B. MCAULIFFE, M.D.
GUSTAV W. BRATENAH, M.D.	JAMES P. MCEVOY, M.D.
JOHN CABOT, M.D.	FERDINAND S. MACHALE, M.D.
WILLIAM H. CASWELL, M.D.	FRANK E. MILLER, M.D.
JOHN H. CLAIBORNE, Jr.,	JACKSON M. MILLS, M.D.
M.D.	LOUIS R. MORRIS, M.D.
CHRISTOPHER J. COLLES, M.D.	GEORGE R. NEWBY, M.D.
WILLIAM L. CULBERT, M.D.	WILLIAM H. PARK, M.D.
CHARLES N. DOWD, M.D.	MORTON R. PECK, M.D.
DAVID O. EDSON,	CHARLES C. RANSOM, M.D.
ELLSWORTH ELIOT, Jr., M.D.	GEORGE A. RICHARDS, M.D.
WILLIAM C. GILLEY, M.D.	JOHN F. RIDLON, M.D.
ROBERT H. GREENE, M.D.	NATHAN S. ROBERTS, M.D.
N. DURRELL HARVEY, M.D.	EDWARD V. SILVER, M.D.
EDMUND Y. HILL, M.D.	WILLIAM K. SIMPSON, M.D.
WARD A. HOLDEN, M.D.	EDWARD STAEHLIN, M.D.
JOSEPH HUBER, M.D.	FRANCIS TOREK, M.D.
WALTER B. JAMES, M.D.	SAMUEL G. TRACY, M.D.
GEORGE W. JARMAN, M.D.	HENRY H. TYSON, Jr., M.D.
CHARLES A. KINCH, M.D.	L. F. WARNER, M.D.
SAMUEL W. LAMBERT, M.D.	WALTER C. WOOD, M.D.

EDWARD THOMAS BOAG,
Clerk of the College.

ANNOUNCEMENT FOR 1892-93.

The College of Physicians and Surgeons, on July 1st, 1891, became, under the authority of the Legislature, a part of Columbia College and will in future be administered as such. This merger, which makes the medical department in a complete sense an integral part of the university system, promises largely to increase the usefulness of the medical school, to favor the thoroughness of scientific medical education, and to promote scientific research. The accessions to the teaching force, notably in the department of anatomy and in the physiological, pathological, and chemical laboratories permit the realization, to a degree hitherto quite impossible, of the great opportunities for instruction and research afforded by the excellence of the dissecting rooms, the laboratories, and apparatus.

The college occupies a group of buildings, given by the late William H. Vanderbilt and his family, and by William D. Sloane, Esq., which stand upon thirty contiguous lots of land, bounded on the south, west, and north by Fifty-ninth Street, Tenth Avenue, and Sixtieth Street, respectively, and lying immediately opposite to the Roosevelt Hospital.

The station, which is a few steps from the college, at the corner of Fifty-ninth Street and Ninth Avenue, is the point of union of the Ninth Avenue and Sixth Avenue Elevated Railroads, by either of which the buildings are immediately accessible from the north and south.

The "across-town" horse-cars of the Belt-line Surface Railway move east and west along Fifty-ninth Street, pass the site of the college, and place it in easy communication with the Second and Third Avenue Elevated roads, and with the numerous lines of horse-cars which reach Fifty-ninth Street from the north and south. All important points in the city, including the various hospitals, can thus readily be reached from the college without a walk of any length.

The buildings appertaining to the college are three in number,

THE COLLEGE BUILDING PROPER ;
THE VANDERBILT CLINIC ;
THE SLOANE MATERNITY HOSPITAL.

THE COLLEGE BUILDING PROPER has been designed to facilitate that combination of didactic instruction with laboratory work which is essential to a modern scientific training. It consists of a *southern portion*, measuring 140 feet by 43 feet, extending along Fifty-ninth Street ; of a *northern portion*, 96 feet by 43 feet, extending along Sixtieth Street ; and of a *middle portion*, 96 feet by 55 feet, connecting the other two. The total area covered is therefore 15,428 feet. The form of the building, and the size and height of the windows, secure abundant daylight in all the rooms, most of which, moreover, possess the electric light. Each story above the basement of the northern and southern portions has been built "in the clear," and contains neither brick partitions nor iron columns. It is therefore possible to remodel the interior at any future time.

VANDERBILT CLINIC.

THE VANDERBILT CLINIC is upon the land given to the college at the corner of Sixtieth Street and Tenth Avenue, and is connected with the college building proper by a covered way.

This institution, which has been built and endowed by the sons of the late William H. Vanderbilt as a memorial of their father, provides a fully equipped dispensary service for the sick poor ; and for the college, whose professors have entire charge of its practice, a field for extended and practical clinical instruction and research in all branches.

Besides its *dispensary department*, the building contains numerous *small rooms* for the direct practical teaching of diagnosis and treatment to groups of learners, and a *theatre*, for clinical lectures, which accommodates an audience of nearly four hundred. During the year 1891, 122,283 patients were treated at this institution, of which 35,715 were new patients.

SLOANE MATERNITY HOSPITAL.

THE SLOANE MATERNITY HOSPITAL is upon the college land at the corner of Fifty-ninth Street and Tenth Avenue.

This is a lying-in hospital of thirty-nine beds, given by William D. Sloane, Esq., whose wife, a daughter of the late William H. Vanderbilt, has endowed the institution by making all of its beds free in perpetuity.

The obstetric service here is under the exclusive direction of the professors of midwifery at the college, the instructor in obstetrics being the resident physician. The members of the graduating class are required each to attend, in the hospital, a certain number of cases of labor.

The students of the third year are divided, at the beginning of the term, into sections of six, each section remaining on duty for one week; during this time they are furnished with rooms in the dormitory free of charge. These lodgings are upon the college grounds, and connected with the hospital by electric wires, so that students are quickly summoned to emergency cases. Beside, instruction is given during the week by the resident physician, and at its close an examination is held in the hospital by the adjunct professor of obstetrics, on the work of the week.

From the time of the opening of the hospital to May, 1891, a period of three years and four months, 1,250 deliveries have taken place. These, with their proper proportion of obstetric operations and with the subsequent treatment of women and infants, have afforded invaluable bedside experience, such as is offered at no other medical school in this country.

ADMISSION.

I.—Applicants for matriculation who declare themselves in writing not to be candidates for the degree of doctor in medicine from this college are admitted, without further formality, to matriculation as special students. Such applicants cannot subsequently become candidates for graduation at this college without full compliance with the terms of admission and graduation as set forth in this catalogue.

II.—Applicants for first matriculation, who are candidates for the degree of M.D., *and who present satisfactory certificates that they had begun the study of medicine, either at a "regular" medical school or with a preceptor, before June 13, 1889*, must either

A. Comply with the requirements set forth under § III.;

B. Present *to the Secretary of the Faculty*, before their first matriculation, certificates of having been successful at examinations for admission to the School of Arts or School of Mines of Columbia College; or

C. Present *to the Secretary of the Faculty*, before their first matriculation, diplomas or certificates of graduation in arts, philosophy, science, or medicine, from recognized colleges or schools of science.

III.—To all persons who did not begin the study of medicine before June 13, 1889, and who matriculate with the intention of becoming candidates for the degree of doctor in medicine, *at any medical school in the State of New York*, the following law, *approved June 13, 1889*, and amended in June, 1890, now applies, viz.:

LAWS OF 1889, CHAP. 468, AS AMENDED BY LAWS OF 1890,
CHAP. 499.

To provide for the preliminary education of medical students.

§ 1. Before the Regents of the University of the State of New York or the trustees of any medical school or college within this State shall confer the degree of doctor of medicine on any person, they shall require him to file with the secretary or recording officer of their university or college a certificate signed by the secretary of the University of the State of New York showing either that he possesses the degree of bachelor or master of arts, of bachelor or master of science, or of bachelor or of doctor of philosophy, received by him from a college or university duly authorized to confer the same, or that during or prior to the first year of his medical study within this State, he passed an examination conducted under the authority of the Regents of the University of the State of New York, or by the faculty of a medical school or college entitled to confer the degree of doctor of medicine, in accordance with the standard and rules of the said Regents in arithmetic, grammar, geography, orthography, American history, English composition, and the elements of natural philosophy; or in their substantial equivalents approved by the said Regents, or that he possessed qualifications which the Regents considered and accepted as fully equivalent to the above named qualifications.

§ 2. This act shall not apply to persons who have already entered upon the prescribed three years' study of medicine, nor shall it alter the time of study or the courses of medical instruction required to be pursued in the medical colleges of this State by existing statutes.

Every person to whom this act applies, must, in pursuance thereof, before he can be admitted to final examination for the degree of M.D., file with the Secretary of the Faculty a MEDICAL STUDENT'S CERTIFICATE OF THE REGENTS OF THE UNIVERSITY OF THE STATE OF NEW YORK.

The conditions to be fulfilled in order to obtain this certificate are as follows :

A.—CERTIFICATES WITHOUT EXAMINATIONS.

Candidates for a medical student's certificate having the degree of bachelor or master of arts, of bachelor or master of sciences, or of bachelor or doctor of philosophy, received from a college or university duly authorized to confer the same ; or having credentials which can be accepted in place of an examination under the act, must send their credentials to "UNIVERSITY EXAMINATIONS DEPARTMENT, ALBANY, N. Y." They will be examined and returned at once, and if accepted, a medical student's certificate will be sent with them. If the certificate be delayed for verification of the candidate, when issued, it will be dated from receipt of the candidate's application, so that the candidate will lose no time.

The credentials, beside the degrees named in the act, which the Regents accept in place of an examination under the act, are as follows :

A certificate of having successfully completed a full year's course of study in any college or university under the supervision of the Regents, or registered by the Regents as maintaining a satisfactory collegiate standard ; a certificate of having satisfactorily completed a three years' course in any institution under the visitation of the Regents, or registered by the Regents as maintaining a satisfactory academic standard ; a Regents' diploma ; pass cards issued in the Regents' examinations for eight studies, two of which have been taken from each of the groups, numbered 1, 2, 3, and 4, to be found under B ; or a Regents' certificate for any ten studies taken from these groups collectively.

B.—EXAMINATIONS UNDER THE ACT.

 *N. B.—Candidates should notify the Regents' office at Albany at least ten days in advance, stating at what time, and in what studies they must be examined. They will at once be assigned the most convenient time and place.*

Any person who does not obtain a medical student's certificate without examination, according to section A, must pass the examinations named in the act, or their equivalents, as allowed by the Regents, and referred to under section A.

The times, places, and subjects of these examinations, are set forth below. *On the dates specified, examinations will be held entirely under the charge of the Regents.*

TIMES, PLACES, AND SUBJECTS OF ACADEMIC EXAMINATIONS.

EXAMINATIONS IN			EXAMINATIONS IN		
TIMES.	PLACES.	Group 1, Language		Group 2, Mathematics	
		Modern	Ancient	Group 3, Science	Group 4, History and Social Science Group 5, Other Studies
SEPTEMBER—The last Tuesday, Wednesday and Thursday <i>i. e.</i> , 27-29	New York, Brooklyn, Albany, Syracuse, Buffalo. For law and medical students only	Spelling English, elementary composition		Arithmetic Physics	Geography English history United States history
NOVEMBER—Monday, Tuesday, and Wednesday of Thanksgiving week <i>i. e.</i> , 21-23	New York, and about 200 academies and high schools	Reading Writing Spelling English, elementary composition literature	Cæsar's Comment.	Arithmetic Algebra Plane geometry Physics Physical geography Physiology and hygiene	Geography English history United States history Civics Economics Book-keeping Drawing
JANUARY—20th week from second Monday in September <i>i. e.</i> , 23-27	New York, and about 160 academies and high schools	Reading Writing Spelling English, elementary composition literature Course in Eng. read'g German, 1st year French, 1st year	Latin, 1st year Cæsar's, Comment. Cicero's Orations Virgil's <i>Æneid</i> Latin comp. Greek, 1st year Xenophon's <i>Anab.</i> Homer's <i>Iliad</i> Greek comp.	Arithmetic Algebra Plane geometry Solid geometry Plane trigonometry Astronomy Physics Chemistry Geology Physical geography Botany Zoölogy Physiology and hygiene	Geography Greek history Roman history English history United States history Civics Economics Ethics Book-keeping Drawing
MARCH—Week beginning second Monday <i>i. e.</i> , 13-17	New York, and about 160 academies and high schools	January and March		Same as in January and March, and English, advanced Rhetoric American literature German, 2d year 3d year French, 2d year 3d year	
JUNE—40th week from second Monday in September <i>i. e.</i> , 12-16	New York, and about 320 academies and high schools	Same as in January and March, and Sallust's <i>Catiline</i> Ovid's <i>Metamorpho.</i> Virgil's <i>Eclogues</i>		Arithmetic, advanced Algebra, advanced Physics, advanced Chemistry, advanced	

CURRICULUM.

Beginning with commencement, the college year consists of a period of vacation, extending to the first Monday in October, and of an annual session of between eight and nine months, extending from the latter time to the following commencement, which is held in common with the other departments of COLUMBIA COLLEGE during the second week in June.

The session of 1892-93 will begin upon Monday, October 3, 1892, at 9 A.M.

During the session the exercises will be suspended on the legal holidays: from 1 P.M. of the day before Thanksgiving day to the following Monday morning; from December 24th, at 1 P.M., to January 1st, inclusive; and during a vacation of a few days in the spring, the limits of which will be determined by the faculty.

The work required of the students at this college who are candidates for the degree of M.D. is distributed over three years of study, according to the curriculum set forth below.

OBLIGATORY EXERCISES OF THE REGULAR CURRICULUM.

N. B.—Certificates that all the required practical work has been performed in a manner satisfactory to the Instructors in charge must be presented prior to final examination.

FIRST YEAR.

Didactic Lectures or Demonstrations in: 1. Anatomy. 2. Physiology. 3. Physics and chemistry.

Practical Work in: 1. Dissection. 2. Normal histology. 3. Physiological and medical chemistry.

SECOND YEAR.

Didactic Lectures or Demonstrations in: 1. Anatomy. 2. Physiology. 3. Physics and Chemistry. 4. Materia Medica and Therapeutics, including Hygiene. 5. Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System. 6. Principles and Practice of Surgery. 7. Obstetrics and Gynecology.

Dissection.

Clinics at the Vanderbilt Clinic in: 1. General Medicine. 2. General Surgery.

Practical Clinical Work in: 1. General Medicine. 2. General Surgery.

THIRD YEAR.

Didactic Lectures in: 1. Materia Medica and Therapeutics, including Hygiene. 2. Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System. 3. Principles and Practice of Surgery. 4. Obstetrics and Gynecology. 5. Ophthalmology.

Clinics at the Vanderbilt Clinic in: 1. Diseases of the Mind and Nervous System. 2. Gynecology. 3. Diseases of Children. 4. Venereal Diseases. 5. Diseases of the Skin. 6. Diseases of the Throat. 7. Diseases of the Eye. 8. Diseases of the Ear.

Practical Work in Pathology and Pathological Histology.

Practical Clinical Work in Obstetrics.

N. B.—In the eight subjects enumerated above under the head of “clinics” practical clinical work may be pursued during the third year as an optional study, without extra charge.

GRADUATION.

For candidates for the degree of M.D. the requirements for graduation are as follows, viz. :

I.—A. Candidates who are not already graduates in medicine of recognized institutions must have pursued the regular three years' curriculum at this college; or, the regular curriculum of the second and third years at this college, and such a course at some other medical school as shall have been recognized by the faculty as an equivalent for the first year's curriculum at this college.

No course at another medical school will be so recognized which shall have begun during the same calendar year as that in which the student who shall have attended it shall have entered this college.

B. Graduates in medicine of recognized institutions must have pursued at this college at least the regular curriculum of the third year.

II.—All candidates, whether already graduates in medicine or not, must pass at this college examinations satisfactory to the Faculty in: 1. Anatomy; 2. Physiology; 3. Physics and Chemistry; 4. Materia Medica and Therapeutics, including Hygiene; 5. Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System; 6. Principles and Practice of Surgery; 7. Obstetrics and Gynecology; 8. Clinical Studies.

See section headed "EXAMINATIONS."

III.—Candidates must present satisfactory evidence of good moral character and of having attained the age of twenty-one years.

IV.—Candidates must present satisfactory evidence of having complied with the requirements for admission.

See section headed "ADMISSION."

EXAMINATIONS.

The professional examinations in all the eight branches are in writing, and are held immediately after the close of the lectures of the college year.

The examinations in the topic of "Clinical Studies" comprise one question in each of the following subjects, set by the clinical professor thereof:

1. Venereal Diseases; 2. Diseases of Children; 3. Diseases of the Eye; 4. Diseases of the Ear; 5. Diseases of the Throat; 6. Diseases of the Skin.

With the exception of such graduates in medicine as attend at this college only the third year of the curriculum, candidates, if they so elect, are eligible for examination in any or all of the three branches of: 1. Anatomy; 2. Physiology; and 3. Physics and Chemistry, and upon these only, on completing the first two years of the curriculum.

Such an examination in any or all of the said three subjects, if satisfactory, is accounted final, *unless the candidate subsequently is rejected for the degree of M.D. as set forth below.*

A candidate who has been unsuccessful, at the end of his second year, at any of the three examinations above specified, is not eligible for re-examination in the branch or branches in which he has failed *until the time of his final examination for graduation.*

According to the merits of his examinations, three results of the latter are possible in the case of a candidate for the degree of M.D.:

1. He is "passed" when his examinations have been satisfactory in each and all of the eight branches of medical teaching enumerated under the head of "Graduation," § II.
2. He is "conditioned" when the average merit of his eight examinations has been satisfactory, while in one or more branches he has been found deficient. In this case the candidate can proceed to his degree only on the condition that he first pass a re-examination in the deficient branch or branches, not sooner than at the next regular examination. Candidates are not "conditioned," however, in the topic of "Clinical Studies."
3. He is "rejected" when the average merit of his eight examinations has been unsatisfactory. *In this case the candidate must be re-examined in all the eight branches.*

Final examinations for the degree of M.D. are held annually in October for the sole purpose of re-examining "rejected" or "conditioned" candidates.

A candidate who has been "rejected" twice, or more, for the degree of M.D. is thereafter eligible for re-examination only at the stated examinations held in the spring, and must pay a new matriculation fee between every two periods of re-examination.

INSTRUCTION,

The teaching at this college comprises didactic and clinical lectures and demonstrations; practical clinical instruction given to groups of students; and laboratory work.

I.—LECTURES AND DEMONSTRATIONS.

Didactic lectures and demonstrations, including those in which the magic lantern is used, are given throughout the college year on the following subjects, viz.: 1. *Anatomy*. 2. *Physiology*. 3. *Physics and Chemistry*. 4. *Materia Medica, Therapeutics and Hygiene*. 5. *Obstetrics and the Diseases of Women*. 6. *Surgery*. 7. *Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System*. 8. *Ophthalmology*.

CARTWRIGHT LECTURES OF THE ALUMNI ASSOCIATION.—According to the provisions of the Cartwright Trust, there is biennially given, under the auspices of the Alumni Association, a course of lectures more especially addressed to graduates in medicine. This course was delivered during the session of 1889-90, by JOHN S. BILLINGS, M.D., LL.D., Surgeon U. S. Army, upon *Vital and Medical Statistics*.

CLINICS.

Eleven clinics are given each week at the VANDERBILT CLINIC, as follows:

Surgical.—Professors Bull and McBurney; Mondays, 12 M.

Diseases of the Ear.—Professor Buck; Mondays, 2 P.M.

Diseases of the Skin.—Professor Fox; Mondays, 3 P.M.

Diseases of the Throat (with laryngoscopic demonstrations).—Professor Lefferts; Tuesdays, 2 P.M.

Diseases of the Eye.—Professor Knapp; Tuesdays, 3 P.M.

Diseases of Children.—Professor Jacobi; Wednesdays, 2:30 P.M.

Venereal Diseases.—Professor Taylor; Thursdays, 2 P.M.

Medical.—Professor Delafield; Thursdays, 3 P.M.

Surgical.—Professor Weir; Fridays, 12 M.

Diseases of the Mind and Nervous System.—Professor Starr; Fridays, 2 P.M.

Diseases of Women.—Professor Tuttle; Fridays, 3 P.M.

HOSPITAL CLINICS.

Beside the college clinics, the general and special hospitals of New York afford most important fields for clinical teaching. This college is strongly represented on the staffs of these institutions, and regular clinical instruction at hospitals is made a prominent feature of the curriculum. *Admission is free* to all matriculated students. At all the following hospitals instruction is given by officers of the college.

SLOANE MATERNITY HOSPITAL, corner of Fifty-ninth Street and Tenth Avenue.—See page 6.

ROOSEVELT HOSPITAL.—This has long been the seat of thorough clinical work, and has become of special importance in this respect from its position immediately opposite the new buildings of the college upon Fifty-ninth Street, between Ninth and Tenth Avenues. Moreover, this hospital has lately received a bequest of several hundred thousand dollars, for the erection and endowment of a new surgical operating theatre, which is expected to offer unrivalled facilities for instruction in this department.

The Roosevelt is a general hospital of one hundred and eighty beds, and it also possesses a flourishing out-patient department.

Public clinics are given here as follows, throughout the college session:

Medical.—Mondays, at 4 P.M., Professors Delafield and Draper, and Dr. Roosevelt. Throughout the session the same gentlemen will give instruction to the class in sections in the Hospital Wards.

Surgical.—Saturdays, at 2:30 P.M., Professor McBurney.

Gynecological.—Every week day except Friday, at 2:30 P.M., Professor Tuttle. Admission, by invitation, to operations.

NEW YORK HOSPITAL, Fifteenth Street, between Fifth and Sixth Avenues.—Reached from the college by taking the Sixth Avenue Elevated Railroad at the corner of Ninth Avenue and Fifty-ninth Street, and leaving the cars at the corner of Fourteenth Street and Sixth Avenue.

This is a general hospital of the highest class, of one hundred and fifty beds, with an out-patient department.

The public clinics are the—

Medical.—Mondays and Thursdays, at 2:30 P.M., Professors Peabody and Partridge.

Surgical.—Thursdays, 2:30 P.M., Professor Markoe; Wednesdays and Saturdays, 2:30 P.M., Professors Weir and Bull.

BELLEVUE HOSPITAL, Twenty-sixth Street and East River.—Directly accessible from the college by the horse-cars of the Belt Line, which run from the door of the college to that of the hospital; or, by leaving the horse-car at the corner of Fifty-ninth Street and Third Avenue, and taking the Third Avenue Elevated train to the corner of Third Avenue and Twenty-eighth Street.

The service of this hospital and of its out-patient department covers a great range of practice.

The following clinics are held here throughout the session:

Medical.—Tuesdays, 1:30 P.M., Professors Jacobi and Peabody, and Drs. Roosevelt and James.

Surgical.—Thursdays, 2:30 P.M., Drs. Hartley, F. H. Markoe, and Gallaudet.

Diseases of Children.—Mondays, 2:30 P.M., from April to June, Professor Jacobi.

CHARITY HOSPITAL, Blackwell's Island, East River.—To reach this institution the steamer should be taken at the foot of East Fifty-second Street. This hospital offers a peculiarly rich field for the study of venereal diseases, over two thousand such cases being received yearly. Professor Taylor gives a clinic from October to March, inclusive, as follows:

Venereal.—Wednesdays, 2 P.M.

NEW YORK CANCER HOSPITAL, One Hundred and Sixth Street and Eighth Avenue.—Elevated Railroad station, One Hundred and Fourth Street and Ninth Avenue. Can be reached also by the Eighth Avenue surface road.

Two clinics a week are held here, viz.:

Surgical.—Mondays, 2:30 P.M., Dr. Hartley; Thursdays, 2:30 P.M., Dr. B. F. Curtis.

NEW YORK OPHTHALMIC AND AURAL INSTITUTE, 46 East Twelfth Street.—Reached by the Sixth Avenue Elevated train, which should be left at the Fourteenth Street station.

This hospital has thirty beds, and a large daily dispensary

service is held for diseases of the eye and ear. Throughout the session the following clinic is held:

Ophthalmological.—Saturdays, 2:30 to 5 P.M., Professor Knapp (admission by invitation of Sections). Selected cases for diagnosis; the most important operations on the eye.

DEMONSTRATIONS OF PATHOLOGICAL ANATOMY.

The numerous autopsies which occur at the Roosevelt, New York, Bellevue, and Charity Hospitals, during the session, take place before the students usually at regular hours, and the hospital pathologists demonstrate and explain the lesions discovered. Whenever autopsies are to occur at these institutions, timely notice is posted upon the bulletin-board of the college.

The hours for autopsies are as follows:

Roosevelt Hospital.—3 P.M., Dr. Hodenpyl.

New York Hospital.—2 P.M., Dr. Ferguson.

Bellevue Hospital.—1 P.M., Dr. Ely.

Charity Hospital.—Dr. Van Gieson.

II.—PRACTICAL CLINICAL INSTRUCTION.

One of the greatest advantages secured to the college by the founding of the Sloane Maternity Hospital and the Vanderbilt Clinic is the possibility of organizing a system of practical clinical teaching whereby each member of numerous small classes may be brought into direct personal contact with the cases under examination.

An outline is appended of the instruction proposed upon this plan, which is given by the clinical lecturers and their assistants.

GENERAL MEDICINE.—Physical diagnosis. *Required.*

GENERAL SURGERY.—Diagnosis and treatment, including minor surgery, bandaging, etc. *Required.*

MIDWIFERY.—Attendance upon cases of labor, at the Sloane Maternity Hospital, by advanced students, under the direction of the obstetricians of the hospital (see page 7). *Required.*

GYNECOLOGY.—Practical instruction in diagnosis and treatment, including the use of instruments. *Optional.*

DISEASES OF CHILDREN.—Diagnosis and treatment. *Optional.*

VENEREAL DISEASES.—Diagnosis and treatment. *Optional.*

DISEASES OF THE NERVOUS SYSTEM.—Examination of cases, including electrical tests; diagnosis and localization of lesions; electro-therapeutics. *Optional.*

DISEASES OF THE SKIN.—Diagnosis and treatment. *Optional.*

DISEASES OF THE EYE.—Diagnosis, including the tests for errors of refraction and accommodation and the use of the ophthalmoscope, and treatment. *Optional.*

DISEASES OF THE EAR.—Diagnosis and treatment. *Optional.*

DISEASES OF THE THROAT.—Diagnosis and treatment, including the use of the laryngoscope and rhinoscope. *Optional.*

III.—LABORATORY WORK.

PHYSIOLOGY.—The physiological laboratory has been fully equipped, and has received important accessions to its official working force. It is designed to place within the reach of a certain number of graduates, or other advanced workers, such opportunities for original research, under the direction of the professor and demonstrator, as have not until lately been attainable in New York, but are commonly sought for at European universities. The Professor and Demonstrator of Physiology are not practitioners, but devote their entire time to physiological work at the college.

The apparatus of precision required is furnished from the Swift Physiological Cabinet.

This is a collection of physiological apparatus of the latest models, by the best makers, given, together with provision for its increase, by the late James T. Swift, formerly a trustee of the Medical School, as a memorial of his brother, the late Foster Swift, M.D., a graduate of the class of 1857.

OPERATIVE SURGERY UPON THE CADAVER.—Frank Hartley, M.D., Surgeon to Bellevue and the Cancer Hospitals, and Assistant Surgeon to the Roosevelt Hospital, gives special instruction in this branch in the college building from October 15th to May 1st. All the operations that can be practised properly upon the cadaver are done in each course, by the members of the class. Class members, 6; lessons, 13 or 14, of from $1\frac{1}{2}$ to 2 hours each.

ANATOMY.—Every student is required to dissect, and the unusual size and thorough equipment of the department

of practical anatomy at the new building command special attention.

The dissecting room is open all day from October 1st to May 1st, and the demonstrators are present during the mornings, afternoons, and evenings.

A valuable feature is the "BONE-ROOM," on the first floor of the college, contiguous to the students' reading-room. Here a large number of disarticulated skeletons are kept, and the separate bones are lent for study, as books are lent from a circulating library.

PHYSIOLOGICAL AND MEDICAL CHEMISTRY.—Practical instruction is given in the chemical laboratory, on four afternoons of each week, by the Demonstrator of Chemistry and Physics, Charles E. Pellew, E.M., under the direction of the Professor of Chemistry.

The laboratory is newly equipped with microscopes, as well as with spectroscopes, and the necessary chemical apparatus.

The regular instruction is limited to students of the first year, who are enrolled in two divisions. The second division has access to the chemical laboratory during the first half of the session, during which time the first division is occupied with normal histology.

During the second half of the session the first division attends in the chemical laboratory, and the second in that of normal histology.

The division in attendance on practical chemistry is subdivided into two sections, of which one works in the chemical laboratory on Tuesdays and Wednesdays, and the other on Thursdays and Fridays; in each case from 2 to 4 P.M. Special students are also received.

The instruction includes: The preparation and study of typical animal and vegetable substances, such as the carbohydrates, the fats, the proteids, and of the inorganic matters of most importance, including the commonest acids, bases, and salts; distillation; fermentation; artificial digestion; the sanitary analysis of drinking water; and the properties of blood, milk, bile.

The last portion of the course is devoted to the microscopical and chemical examination of urine. Quantitative methods are taught in this as far as practicable, and the students are required to examine carefully numerous samples of pathological urines collected from the various hospitals and clinics of the city.

The microscope is brought into use wherever of value in connection with chemical work.

A special optional course (free) of some twenty-five lectures on medical chemistry is given by the Demonstrator to each division of the class. These lectures include discussions of the composition, occurrence, preparation, properties, and uses of the various substances experimented on, and also full and detailed descriptions of the different tests made in the laboratory.

THE LABORATORY OF NORMAL HISTOLOGY, PATHOLOGICAL ANATOMY AND HISTOLOGY, AND BACTERIOLOGY, founded in 1878 by the Alumni Association of this college, now occupies, with its various departments, two floors of the northern part of the new college building.

Systematic practical instruction in pathological anatomy and histology and bacteriology is given to third-year students, by Dr. T. Mitchell Prudden, director of the laboratory, assisted by Drs. Eugene Hodenpyl and John Slade Ely, on Mondays, Fridays, and Saturdays, from 9 to 11 A.M. The first division of the class will receive this instruction during the first half of the session; the second division during the last half.

Instruction in normal histology is given by Dr. George C. Freeborn, assisted by Drs. Ira T. Van Gieson and J. B. Lynch. This course is arranged for first-year students. During the first half of the session, the first division of the class will meet from 2 to 4 P.M. on Tuesdays, Wednesdays, Thursdays, and Fridays. During the second half of the session, the second division of the class will meet at the same hours.

In the above courses the student is taught the methods of preparing and studying normal and diseased tissues and organs, and makes for his own future use collections of microscopical specimens, from which he prepares in the laboratory a series of outline sketches. Microscopes and reagents are furnished by the laboratory.

A special course is given, by Dr. Freeborn, in microscopical technology.

Special practical instruction is given by Dr. Van Gieson in the normal and pathological histology of the nervous system and the eye.

Abundant opportunity is afforded to practitioners of medicine and others to make special studies or original investigations in experimental pathology, bacteriology, and other themes taught in the laboratory. To the special workers the laboratory is open at all hours of the day.

TEXT-BOOKS AND INSTRUMENTS.

The following list comprises the text-books and instruments recommended.

For the convenience of those who wish to reckon up their expenses in advance, there are appended the lowest prices at which the books, in cloth bindings, can be purchased in New York. These prices are liable to fluctuations. As a rule, the latest editions only of text-books should be purchased.

Gray's Anatomy, \$4.80; *or* Quain's Anatomy, \$9.60; Foster's Physiology, \$3.60; Fownes' Chemistry, \$2.20; Ganot's Physics, \$4; H. C. Wood's Therapeutics, \$4.80; E. Curtis' General Medicinal Technology, 80 cents; Druitt's Surgeon's Vade Mecum, \$3.20; Playfair's Midwifery, \$3.20; *or* Lusk's Midwifery, \$4; Hart and Barbour's Manual of Gynecology, \$5.60; Flint's Practice, \$4.40; Delafield and Prudden's Pathological Anatomy and Histology, \$4.40; Prudden's Normal Histology, \$1; Ashby and Wright on the Diseases of Children, \$4.80; Bumstead and Taylor on Venereal Diseases, \$3.80; Swanzy's Hand-book of Diseases of the Eye, \$2.40; Buck's Manual of Diseases of the Ear, \$2; Van Harlingen's Hand-book of Skin Diseases, \$2; Mackenzie on Diseases of the Throat and Nose, \$3.20; Gowers' Diseases of the Nervous System, \$5.20.

A "dissecting case," containing all the necessary instruments, can be bought for from \$3.00 to \$4.00.

EXPENSES.

ALL FEES ARE PAYABLE IN ADVANCE.

N. B.—For all students of the new curriculum who matriculated for the first time prior to January 1, 1890, the fee for all the required exercises of the year is \$150.

The necessary expenses for graduation at this college, for a student who attends the curriculum during three years, are as follows:

FIRST YEAR.

Matriculation	\$ 5
Fee for all the required exercises of the year	200
Anatomical material, \$1 each part.	

SECOND YEAR.

Matriculation	\$ 5
Fee for all the required exercises of the year	200
Anatomical material, \$1 each part.	

THIRD YEAR.

Matriculation	\$ 5
Fee for all the required exercises of the year	200
Graduation fee	30

Practical clinical work in eight subjects, optional and free, to all students of the third year of the new curriculum.

FEES FOR SPECIAL STUDENTS.

Didactic lectures from each of the numbered seven chairs first enumerated under the head of "Instruction"	\$20
Dissection	10
Dissecting material, per part	1

Practical chemistry, including chemicals and breakage, per course	\$25
Laboratory course in normal histology, including materials	25
Laboratory course in pathology and pathological histology, including materials	25
Laboratory fee for special instruction in pathology or histology or bacteriology, per month	25
Operative surgery on the cadaver, including material, per course	20

For other special courses the fees must be specially arranged for with the instructors.

The clinical lectures at the VANDERBILT CLINIC are free to matriculates who do not take the regular curriculum.

The public clinical lectures, and demonstrations of pathological anatomy, which are given at the hospitals by officers of the college, are free to all matriculates.

BOARD.

Board can be obtained at prices ranging from five to nine dollars a week.

Students are requested, on their arrival in the city, to call at the college and register their names with the clerk of the college, Mr. Boag, who will give them all necessary information and aid them in obtaining board.

CORRESPONDENCE.

Letters requesting information should be addressed to George M. Tuttle, M.D., Secretary of the Faculty, College of Physicians and Surgeons, 437 West Fifty-ninth Street, New York.

HOSPITAL APPOINTMENTS.

By a resolution of the Commissioners of Public Charities and Correction, the faculty of this college is entitled to nominate for appointment by the commissioners, after competitive examination in the college, its proportion of members of the house staff of Bellevue Hospital; such members to be attached to that division of the said hospital which has been assigned to the care of the college.

These nominees all serve the hospital for six months in each of the three grades of junior assistant, senior assistant,

and house physician or house surgeon ; each one having thus a total of eighteen months' experience on the " House Staff."

Four nominations, two medical and two surgical, are made each year by the college from among its graduates under the above resolution.

One medical and one surgical assistant go on duty upon July 1st ; one medical and one surgical assistant upon January 1st.

The choice as to character of service, and the time of beginning the same, is given to the successful candidates in the order of their merit.

Similar positions are filled twice in each year, by public competitive examinations, open to graduates of this college, in the following institutions :

The " non-collegiate " division of Bellevue Hospital ; the New York Hospital ; the Roosevelt Hospital ; St. Luke's Hospital ; Charity Hospital ; St. Vincent's Hospital ; St. Francis' Hospital ; the German Hospital ; the Mount Sinai Hospital ; the Presbyterian Hospital ; the Woman's Hospital ; the Brooklyn Hospital ; St. Catharine's Hospital, Brooklyn ; St. Peter's Hospital, Brooklyn ; the King's County Hospital, Flatbush, L. I.

ALONZO CLARK SCHOLARSHIP.

By the will of the late Alonzo Clark, M.D., LL.D., for many years president of the college, and professor of pathology and practical medicine, it has been placed in the power of the faculty to bestow a scholarship, with an income of about nine hundred dollars a year, for the purpose of promoting the discovery of new facts in medical science.

This has been bestowed for a period of three years, beginning October 1, 1891, upon Ira T. Van Gieson, M.D., of New York City.

PRIZES.

ALL PRIZES ARE PUBLICLY AWARDED AT THE COLLEGE COMMENCEMENT.

HARSEN PRIZES FOR CLINICAL REPORTS,

Founded in 1859, by the late Jacob Harsen, M.D., a graduate of the college.

Three annual prizes are offered for the three best reports, in writing, by students of the College of Physicians and Surgeons, of the clinical instruction given at the New York Hospital during any four consecutive months of the year which ends on commencement day.

These reports must embrace the clinical teaching of both the visiting physician and the visiting surgeon on duty.

The prizes are as follows :

A First Prize of one hundred and fifty dollars ; a Second Prize of seventy-five dollars ; a Third Prize of twenty-five dollars.

A " Harsen Prize Medal " and a diploma are given with each prize.

HARSEN PRIZES FOR PROFICIENCY AT EXAMINATION.

In consequence of the great increase in value of the Harsen Prize Fund, in addition to the three prizes above mentioned, there are awarded three

HARSEN PRIZES FOR PROFICIENCY AT EXAMINATION, VIZ. :

A First Prize of five hundred dollars ; a Second Prize of three hundred dollars ; a Third Prize of two hundred dollars.

The award of these prizes is made as follows :

The ten members of each graduating class who, at their examination for the degree of Doctor in Medicine, have shown the highest proficiency in all the branches combined,

receive each a diploma of "Examination Honors," and are entitled to take part in special competitive examinations, the three most meritorious competitors at which receive the first, second, and third prizes, respectively.

The competitive examinations consist:

I. Of an examination in writing, covering *all the seven branches* of medical teaching.

II. Of an examination upon the cadaver in *practical anatomy*, conducted by the professor of anatomy.

III. Of practical examinations in *clinical medicine* and *clinical surgery*, conducted at the hospitals by the professors of medicine and surgery respectively.

The relative merits of the competitors are decided, and the award of the prizes made, by a committee of three judges, consisting of the president of the college, the presidents of the Association of the Alumni, and a resident alumnus selected by them.

FELLOWSHIPS OF THE ALUMNI ASSOCIATION.

In June, 1891, the trustees, at the request of the Alumni Association of the College of Physicians and Surgeons, established three fellowships to be known as the Fellowships of the Alumni Association of the College of Physicians and Surgeons, the provision for which is made annually by the Association.

These fellowships are open to graduates of the College of Physicians and Surgeons who have shown special aptitude for scientific research in the departments of anatomy, physiology, or pathology. They are to be held for a period of two years and have an annual value of five hundred dollars each. The appointments to these fellowships are to be made by the executive committee of the Alumni Association from candidates who may be presented to them by the professor of anatomy, the professor of physiology and the director of the pathological laboratory.

The persons appointed to these fellowships are expected to devote themselves to scientific research in the department which they may elect, in this country, either in the schools of Columbia College, where they will enjoy free tuition and the privileges of the laboratories, or in other institutions at their own expense. At the end of two years the holders of these fellowships will be expected to present to the Association a thesis containing evidence of independent or original work in their special department. The appoint-

ments to these fellowships will be made for the first time in May, 1892.

The names of the successful candidates for these fellowships will be announced at the commencement following their appointment, and will be published in the annual catalogue. The payments on account of the fellowships will be made by the treasurer of Columbia College according to the rules adopted in other fellowships.

ALUMNI ASSOCIATION PRIZE.

This is a biennial prize of *five hundred dollars* open for competition to the alumni of the college. It is awarded for the best medical essay submitted upon any subject the writer may select, and is open to competition in alternate years with the Cartwright prize.

If no one of the competing essays be deemed sufficiently meritorious, the prize is not awarded.

An essay, in order to be held worthy of the prize, must contain the results of original investigations made by the writer.

This prize is not awarded to any essay which is the work of more than one author, or which is at the same time submitted for another prize.

Each competitor is required to send with his essay to the Prize Committee a statement that these requirements have been complied with.

Essays in competition for the prize to be awarded at commencement, 1892, must be sent to the secretary of the Alumni Association on or before April 1, 1892.

Competing essays must each be marked with a device or motto, and accompanied by a sealed envelope, similarly marked, containing the name and address of the author.

CARTWRIGHT PRIZE OF THE ALUMNI ASSOCIATION.

The prize consists of *five hundred dollars*, and is offered for competition in alternate years with the Alumni Association prize.

It is awarded on the same terms as the latter, *except that it is open to universal competition.*

STEVENS TRIENNIAL PRIZE,

Established by the late Alexander Hodgdon Stevens, M.D., formerly president of the college, on the following plan:

The prize, awarded triennially, consists of the interest

yielded by the principal fund during three years, and amounts to *two hundred dollars*.

The administration of the prize is entrusted to a commission, consisting of the president of the College of Physicians and Surgeons (*ex-officio*), the president of the Alumni Association (*ex-officio*), and the professor of physiology (*ex-officio*) in the same institution.

The prize is awarded to no essay unless it include the results of original research by the writer upon the subject chosen.

In 1894 this prize will be given to the *best medical essay* submitted, upon any subject the writer may select.

The competing essays must be sent in to the president of the College of Physicians and Surgeons, New York, on or before the first day of January, 1894. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope, bearing the same device or motto, and containing the name and address of the author. The envelope belonging to the successful essay will be opened, and the name of the author announced, at the annual commencement of the college in 1894; at which time, also, the subjects for the next triennial prize (1897) will be announced.

This prize is open for universal competition.

JOSEPH MATHER SMITH PRIZE.

The fund for this prize is given by the relatives, friends, and pupils of the late Dr. Smith, as a memorial of his services as professor in the college from 1826 to 1866. Under the provisions of the trust, an annual prize of *one hundred dollars* is awarded for the best essay (if sufficiently meritorious) on the subject of the year, presented by an alumnus of this college. The prize committee, consisting of the president of the college, the professor of pathology and practical medicine, and the president of the Alumni Association, designate each year the subject for the following year. The competing essays should be sent to the president of the college on or before March 10th, each essay signed with a device or motto, and accompanied by a sealed envelope, inscribed with the same device or motto, and containing the name of the author. The envelope of the successful essayist will be opened, and the prize awarded at the annual commencement next following.

An essay in competition for the prize to be awarded in 1892 may be upon any subject relating to hygiene, pathology, or practical medicine.

MEDICAL CLASS.

SESSION OF 1891-92.

NAME.	RESIDENCE.
Isador Abrahamson, B.S.....	New York City.
Vanderpoel Adriance, A.B.....	New York City.
✓ Aristides Agramonte... ..	New York City.
Thomas Francis Aiken.....	New York.
John Frank Waite Allen.....	New York City.
Maxwell H. Allen.....	Texas.
William Frederick Amos, M.D.....	Oregon.
Oran Purdy Andrews.....	Ohio.
Palmer Armstrong.....	New York City.
William Lucius Armstrong, A.B., Ph.B.....	New York City.
William Rowland Babcock.....	Connecticut.
John Russell Bacon.....	Connecticut.
Julius William Baier.....	New Jersey.
William Seaman Bainbridge.....	Brooklyn, N. Y.
Samuel Harbourne Baldwin, A.B.....	New Jersey.
Samuel Bandler.....	New York City.
George Wheelock Banning	Connecticut.
Joseph De Vere Barber.....	Rhode Island.
Alexander Edward Wilson Barker.....	New York City.
Herbert Luther Barker, Ph.B.....	New York.
Walter Jarvis Barlow, A.B.....	New York.
William Folger Barnitz.....	New York City.
Donald McLean Barstow, A.B.....	New York.
Charles Bartow, A.B.....	New York.
Joseph Baum, B.S.....	New York City.
Eugene Walker Belknap, A.B.....	New York City.
Harry Leach Bender.....	New York City.
Frank Everett Benjamin, Ph.G.....	New York.
✓ Albert Ashton Berg, A.B.....	New York City.
Herman Betz, Ph.G.....	New York City.
Samuel Beyea.....	New York.
Harry Mortimer Billings.....	New York City.
Ernest Smith Bishop, A.B.....	Connecticut.
William Bascom Bissell, A.B.....	New York City.
Bruce Gould Blackmar.....	Connecticut.

NAME.	RESIDENCE.
William Josiah Blalock, A.B.	Georgia.
Alexander Maxwell Blasdell	Brooklyn, N. Y.
Frederick Bleil, A.B.	New York City.
Clarence Joseph Blum	New York City.
Charles Ridgeway Blundell, B.S.	New Jersey.
Edward Wilmot Blyden, Jr.	Liberia, West Africa.
Martin Laurence Bodkin	Brooklyn, N. Y.
William John Bohlk	New York City.
John Gerard Louis Borgmeyer	New Jersey.
William Lincoln Bosserman	New York.
David Bovaird, Jr., A.B.	Pennsylvania.
Franklin Fleetwood Bowyer	New York City.
James Van Wagner Boyd	New York City.
William Augustus Boyd, Jr.	New York City.
Arthur Irving Boyer	New York City.
Thomas Naylor Bradfield	New Jersey.
Bernard Ira Bradford	Wisconsin.
Harry Merrit Bradley, B.S.	Iowa.
Charles Louis Adrien Brasseur	New York City.
Arthur Richard Braunlich, Ph.G.	Brooklyn, N. Y.
Everett Clifton Brennand	Massachusetts.
Marks Bresler	New York City.
William Barrett Brinsmade, A.B.	Brooklyn, N. Y.
John Thomas Brosnan, A.B.	Brooklyn, N. Y.
John Glover Broughton, Jr., A.B.	New Jersey.
Augustus Homer Brown, A.M.	New York City.
Edward Wells Brown	Wisconsin.
Joseph Douglas Brown, Ph.B.	New York City.
Robert Curtis Brown, A.B.	Wisconsin.
Barton Wilbur Brush	New York.
Clarence Whitfield Buckmaster	New York.
William Thomas Buckner	Kentucky.
William Edward Buist	Tennessee.
Charles Vincent Burke	New Jersey.
Edward Ward Burns	Pennsylvania.
Reed Burns, M.D.	Pennsylvania.
William Bushnell, Jr.	Ohio.
John Bernard Busteed	New York City.
Henry Vaughan Byrne	Brooklyn, N. Y.
John Andrew Calnane	Maine.
Ernest Goodell Carleton, A.B.	Amballa, India.
Matthew Laurence Carr, A.B.	North Carolina.
James Green Carson	New York.
West Montgomery Carson	New York.
George Herbert Carter, A.B.	New York.
Stephen Tallmadge Carter, B.S.	New York City.
Amasa Day Chaffee, A.B.	Connecticut.

NAME.	RESIDENCE.
Edwin Crosby Chamberlin.....	New York.
Frank Warren Chamberlin.....	Massachusetts.
Alexander Murray Cheney.....	Illinois.
Frank Malcolm Child.....	New Jersey.
Albert King Chipp.....	New York City.
Theodore Winthrop Church, A.B.....	New York.
Marcus Lerane Clawson.....	New Jersey.
Henry Archer Cleaver, Ph.B.....	Maryland.
Edward Graham Clifton.....	North Carolina.
John Elwyn Cochran.....	New York.
Henry Dingee Coe.....	New York City.
Howard Dennis Collins, A.B.....	Rhode Island.
Howard Ogle Comegys.....	New York City.
Seth Cook Comstock.....	Connecticut.
John Timothy Connelly.....	New Jersey.
Edmund Howell Cook.....	New York.
Finley Ransom Cook, A.B.....	New York City.
Irving Jabez Cook.....	New Jersey.
Lee Cooke.....	New York City.
John Philip Cooney.....	Rhode Island.
Daniel Ferry Costello.....	New York City.
Samuel James Craig.....	Brooklyn, N. Y.
Albert Louis Cronmeyer.....	New York City.
John Joseph Cronin, A.B.....	Massachusetts.
Frank Elihu Crosier, A.B.....	Massachusetts.
Robert Francis Cunnion, A.B.....	Brooklyn, N. Y.
Edward William Daniels.....	Massachusetts.
Nicholas Robert Dann, A.B.....	New York City.
Joseph Davidson.....	New York City.
George Van Ness Dearborn, B.L.....	New Hampshire.
Henderson Brooke Deady.....	Oregon.
Charles Abnon de Lima.....	New York City.
Nelson Lloyd Deming, Ph.B.....	New York City.
Edward Francis Denner, A.B.....	New York City.
Christopher Dermody.....	Connecticut.
William Edward de Salazar.....	New York City.
William Knecht Detwiller.....	Pennsylvania.
Edwin Evans Dickinson.....	Bermuda.
Joseph Aloysius Dillon, B.S.....	New York City.
Ezekiel Grant Dilworth.....	New Jersey.
Richard Herman Dingelstedt.....	New Jersey.
Frank Diossy.....	New York City.
Eberhard Wilhelm Dittrich.....	New York City.
Herbert Sidney Dixon, A.B.....	New York City.
Joseph Smith Dodd.....	New Jersey.
Walter Dodge, Ph B.....	Connecticut.
Robert Metcalf Dodsworth, Ph.B.....	California.

NAME.	RESIDENCE.
Fernand Dorbesson, A.M.....	New York City.
George Lathrop Douglas.....	New York.
Moses Duckman.....	New York City.
George Thomas Dutcher.....	New York.
Jonathan Dwight, Jr., A.B.....	New York City.
Irving Halsey Edington, M.D.....	Tennessee.
Horace Wardner Eggleston.....	New York City.
Edward Cargill Ehlers.....	New York City.
George Aloysius Elliott, A.B.....	New York City.
Charles Albert Elsberg, A.B.....	New York City.
Leonard Wheeler Ely, A.B.....	New York City.
John Seymour Emans, A.B.....	New York.
Harry Wyle Emerson.....	New Jersey.
Floyd Bonesteel Ennist.....	New York.
Edward Robert August Eschenbach.....	New York City.
Walter Horace Farrier.....	New Jersey.
Edward Sherman Farrington.....	New York City.
Louis Julius Fehr.....	New Jersey.
Frank Sidney Fielder, Ph.B.....	New York.
Edward Bronson Finch, A.B.....	Massachusetts.
William Young Finch.....	New York.
Gustav Grant Fischlowitz, A.B.....	New York City.
Parnell Ellis Fisher, A.B.....	Rhode Island.
Albert Franklin Fitch, Jr., B.S.....	Brooklyn, N. Y.
Paul Fitz-Gerald, A.B.....	Minnesota.
Clyde Sinclair Ford, B.S.....	West Virginia.
Celso Fortin.....	Central America.
Ernest Wallace Fowler.....	Dist. of Columbia.
Russell Story Fowler.....	Brooklyn, N. Y.
James Lindsay France.....	Connecticut.
Simon Gabriel Frank.....	New York City.
Isaac Frankenstein.....	New York City.
Robert Samuel Freedman.....	New York City.
Emil Frei.....	Brooklyn, N. Y.
Eugene (Hyman) Fried.....	New York City.
Ventura Fuentes, A.B.....	New York City.
Joseph Edward Fuld.....	New York City.
James Thomas Gallagher, A.B.....	Brooklyn, N. Y.
Joshua Brush Gesner, A.B.....	New Jersey.
Ernest Carson Gibney, A.B.....	New York City.
— Homer Weagley Gibney.....	New York City.
Charles Alexander Gilchrist, A.B.....	Delaware.
Howard Lawrence Gill.....	New York City.
Peter Gilsey, Jr.....	New York City.
Henry Robert Gledhill, A.B.....	Illinois.
James Patrick Glynn, A.B.....	Brooklyn, N. Y.
Eugene Everett Goff.....	Rhode Island.

NAME.	RESIDENCE.
Raphael Henry Goldberg.....	New York City.
David Goldberger.....	New York City.
Charles Howard Goodrich.....	Connecticut.
Howard Jerome Goodrich.....	New York.
Ralph Schuyler Goodwin, Jr., Ph.B.....	Connecticut.
John Duffin Gorman.....	New York City.
Charles Ernst Herman Graeb.....	New York City.
Charles Solomon Grant, M.D.....	New York.
William James Greanelle, B.S.....	New York City.
John De Lafayette Grissim.....	California.
Samuel Saunders Guerrant, M.D.....	Virginia.
Frederick William Hagney, B.S.....	New Jersey.
Dupree Meriweather Hall, A.B.....	Tennessee.
John Samuel Halsey.....	New Jersey.
John Taylor Halsey.....	Brooklyn, N. Y.
David Joseph Hamburg, B.S.....	New York City.
Erskine Erasmus Hamilton.....	Massachusetts.
Varney Bernard Hamlin.....	New York.
George Tillinghast Hammond, Jr.....	Brooklyn, N. Y.
James Parton Haney, B.S.....	New York City.
Edward William Hanlon.....	California.
Sherwood Abner Hanna.....	New Jersey.
Harry Theodore Harding.....	Dist. of Columbia.
William Franklin Harper, M.D.....	Ohio.
William Nelson Harrison.....	New Jersey.
Donald Purple Hart, Ph.B.....	Ohio.
Horace Sedgwick Hart, A.B., Ph.B.....	Connecticut.
Hugh Macdougall Hart.....	New Jersey.
John Christopher Hart.....	New Hampshire.
Eugene Howe Hartnett, B.S.....	New Jersey.
James Foster Hasbrouck.....	New York City.
Robert Forbes Hawkes, M.D.....	New York City.
Roy Harlan Hawkes.....	New York City.
William Van Valzah Hayes, Ph.B.....	New York City.
Edwin Pelton Hayward.....	Nebraska.
Willard Avery Heacock.....	New York City.
George Stanley Heft.....	New York City.
John Franklin Heim.....	New York City.
George Isaac Hemingway.....	Connecticut.
Charles Conley Hendrick, A.B.....	Pennsylvania.
John Patrick Henry, M.D.....	New York City.
Joseph Henschel, A.B.....	New York City.
Frederick Marcus Henssler.....	New York City.
Joseph John Higgins.....	Connecticut.
John Augustus Hill, Jr.....	New York City.
William Avery Hillard.....	Rhode Island.
Fred Lyman Hills.....	New York.

NAME.	RESIDENCE.
John Hoch, A.B.....	New York City.
Edward Stirling Hodgskin.....	Brooklyn, N. Y.
Abraham Frank Hoeffcker.....	New Jersey.
Harry Bigelow Holmes, A.B.....	Massachusetts.
Frederick Whitcomb Hornick.....	New Jersey.
Alfred Elisha Hubbard, Ph.G.....	Connecticut.
George Clinton Hubbard.....	New York.
Carl Adolph Huber.....	New York.
John Jacob Hubschmitt, Ph.G.....	New York City.
Max Hühner.....	New York City.
Harry Hutchinson, A.B.....	New Hampshire.
James Hutchinson, A.M., M.D.....	New York City.
Eugene Robert Hynard, Ph.G.....	New York City.
Alfred Jacobs, A.B.....	New York City.
Frederick William James.....	New York.
Schuyler Clinton Jaques.....	Indiana.
Seymour Tilford Jarecki.....	Colorado.
George Latham Bowne Jarvis.....	Pennsylvania.
David Stuart Dodge Jessup, A.B.....	Syria.
Philip Edwards Johnson, A.B.....	New York.
William Cameron Johnston.....	New York City.
Joseph Chaim Josephson, A.B.....	New York City.
Calvin Jouard.....	New York City.
Edgar Collins Joyce.....	New York City.
Albert Martin Judd.....	New York.
Julius Jungmann.....	New York City.
Alfred Kayne.....	New York City.
James Edmond Keane.....	New York City.
Frederick Conrad Keller.....	New York City.
Thomas Alexander Kenyon.....	New York City.
Edward Cumberland Kershner, A.B.....	Brooklyn, N. Y.
Edward Stephen Kiley, A.B.....	Rhode Island.
Charles Goodrich King.....	Rhode Island.
Bayard Tredwell Kissam.....	New Jersey.
Edwin Mathews Kitchel.....	New Jersey.
Ferdinand Austin Kittinger.....	New York.
Charles Demarest Kline.....	New York.
Louis Theodore Klinker.....	New York City.
- Arnold Herman Knapp, A.B.....	New York City.
Charless Platt Knowles.....	New York.
Josiah George Knowlton.....	Missouri.
William Frederick Koerner, M.D.....	Brooklyn, N. Y.
Carl Henry Kroeber.....	New York.
James Krom.....	New York.
William Karl Kubin.....	New York City.
Albert Franz Gotfried Kuehn, Ph.G.....	New York City.
Joseph Allen Kyle, B.S.....	Texas.

NAME.	RESIDENCE.
Linnaeus Edford La Fétra, A.B.....	Dist. of Columbia.
William Watson Laing.....	Brooklyn, N. Y.
James Rudolph Laird.....	New Jersey.
Charles Edward Lambert.....	New York.
George Ludwig Laporte, Jr.....	New Jersey.
John Henry Larkin, A.B.....	New York City.
James Ralston Lattimore.....	Georgia.
William Richard Cunningham Latson.....	New York City.
William Tilson Lawson.....	New York City.
Jesse William Lazear, A.B.....	Maryland.
Edward Leaming.....	New York City.
A. Lincoln Leatherman.....	Ohio.
Thomas Sim Lee, A.B.....	New York City.
Arnold Gustave Leo.....	New York City.
Fred Eugene Leonard, A.B.....	Ohio.
Frederick William Lester.....	New York.
Reginald Joseph Moss Lewis.....	New York City.
Emmanuel Libman, A.B.....	New York City.
Alfredo Lizano, A.B.....	Costa Rica, C. A.
Murray Loewenthal.....	New York City.
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Henry Christian Lovis, Ph.G.....	New York City.
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William Gordon Lyle.....	Canada.
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Montefiore Levy Maduro.....	New York City.
Hugo Maetke.....	Ohio.
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Bartholomew Edward Mahaney.....	Massachusetts.
Alfred Mann, A.B.....	Wisconsin.
John Preston Mann, M.D.....	New York City.
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Richard Marsop.....	New York City.
Kingsley Walton Martin, Ph.B.....	New York City.
Thornley W. Martin.....	New Jersey.
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Frank Stuart Mathews, B.S.....	Pennsylvania.
Henry Smith Mathewson, A.B.....	Connecticut.
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James Francis McCaw.....	New York.
George Eldredge McClellan, Ph.B.....	Connecticut.
William Thomas McConvill.....	New Jersey.
John Butler McCook, B.S.....	Connecticut.

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John Charles McCoy.....	New Jersey.
Champe Carter McCulloch, Ph.B., M.D.....	Texas.
John Timothy McGillicuddy.....	Massachusetts.
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William Robert McGuirk.....	Rhode Island.
James Henry McInerny, M.D.....	Massachusetts.
William Howard McKenzie, A.B.....	New Jersey.
James Stephen McLaughlin.....	Massachusetts.
Frank Harrold McLaury.....	New York City.
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William Henry McWilliam.....	New York City.
Victor John Meltzer.....	New York City.
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Alfred Edward Meyer.....	New York City.
Emery Austin Miller.....	New York City.
William Percy Miles.....	New Jersey.
Philip William Moeller.....	New York City.
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Carl George Christian Mund.....	New York City.
Herbert Walter Murlless.....	Connecticut.
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John Donaldson Murray.....	New York City.
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James Le Grand New.....	New York.
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Matthias Nicoll, Jr., A.B.....	New York City.
Charles Norris, Jr., Ph.B.....	New York City.
Nathaniel Read Norton, Ph.B.....	Brooklyn, N. Y.

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Carl Osterheld.....	New York.
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Samuel Barfield Palmer, A.B.....	Georgia.
Edward Oliver Parker, A.B... ..	Massachusetts.
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Charles Howard Peck.....	Connecticut.
Charles Ernest Pellew, E.M.....	New York City.
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Arthur Lynwood Reeve.....	Brooklyn, N. Y.
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Michael Placzek Rich.....	New York City.

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George Johnson Rittenhouse.....	New York City.
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Paul Skiff Robinson, Ph.B., M.D.....	Connecticut.
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John Wellington Sansom.....	New Jersey.
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William Arthur Albertson Sloat.....	New York.

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Wright Smith.....	New York City.
Langdon Trufant Snipe, A.B.....	Maine.
Percy Clinton Snowden.....	New York.
Lazarus Sylvester Sobel.....	New York City.
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William Laing Somerset, A.M.....	Connecticut.
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Harry Grant Stafford.....	New York City.
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Solomon Steiner.....	Bohemia.
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Plowden Stevens, Jr., B.S.....	New York City.
Forney Caldwell Stevenson.....	Alabama.
George David Stevenson.....	New Jersey.
Moses Ashby Stivers.....	New York.
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Frank Crombie Studley, B.S.....	Wisconsin.
Fred John Stuhr.....	New Jersey.
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Dennis Joseph Sweeny.....	Brooklyn, N. Y.
Martin John Synnott.....	New Jersey.
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Benjamin Torrens.....	New York City.

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Edwin Bingham Trippe.....	New York.
Molyneaux Lawrence Turner.....	New York City.
Thomas Dyer Tuttle, B.S.....	New York City.
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Gilbert Julius Van der Smisen.....	New York City.
Jefferson Brockner Van Tine.....	New York City.
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Harwood Vernon, A.B.....	New Jersey.
Carlos Volio-Jimenez, A.B.....	Costa Rica, C. A.
James Ditmars Voorhees, A.B.....	New Jersey.
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Brownlee Robertson Ward, A.B., Ph.B.....	New York City.
Freeman Ford Ward.....	Ohio.
Martin Wiener Ware.....	New York City.
Thomas Pinckney Waring, A.B.....	Georgia.
William Barnard Warren, M.D.....	Massachusetts.
Isaac Charles Warsaw, Ph.G... ..	New York City.
Bertram Howard Waters, A.B.....	Pennsylvania.
James Thomas Watkins, Jr.....	New York City.
Royal Phillips Watkins, A.B.....	New York City.
Robert Watts, Jr., A.B.....	New York City.
William Edmund Weber, A.B.....	New York City.
Joseph Thomas Welch, B.S.....	New York.
Caleb Frazer West.....	Kentucky.
Calvin B. West.....	New York.
Arthur Charles Wheeler.....	Pennsylvania.
Robert Taylor Wheeler, Ph.B.....	New Jersey.
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James Logan Whitbeck, A.B.....	California.
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William Elrich Wild.....	New York City.
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Edward Lincoln Williamson, A.B.....	New York City.

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Sidney Yankauer, A.B.....	New York City.
Charles Bellamy Young.....	Brooklyn, N. Y.
Harry Augustus Young, B.D.....	Salt Lake City, Utah.
William Bellamy Young.....	Brooklyn, N. Y.
John Louis Zabala, B.S.....	California.
Charles Henry Bernard Zeiser.....	New York.
Total.....	570.



Columbia College
in the City of New York

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PHYSICIANS AND SURGEONS

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1892-93

CIRCULAR OF INFORMATION

1893-94

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T. GAILLARD THOMAS, M.D. Emeritus Professor of Obstetrics and Gynecology	600 Madison Avenue
JOHN T. METCALFE, M.D. Emeritus Professor of Clinical Medicine	149 West 57th Street
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JOHN G. CURTIS, M.D. Professor of Physiology	327 West 58th Street
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WILLIAM T. BULL, M.D. Professor of Surgery	35 West 35th Street
M. ALLEN STARR, M.D. Professor of Diseases of the Mind and Nervous System	22 West 48th Street

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Director of the Laboratories of Histology, Pathology, and Bacteriology	

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GEORGE H. FOX, M.D.....	18 East 31st Street
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CHARLES MCBURNEY, M.D.....	28 West 37th Street
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Clinical Professor of Venereal Diseases	
FRANCIS P. KINNICUTT, M.D.....	42 West 37th Street
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J. WEST ROOSEVELT, M.D.....	32 East 31st Street
Clinical Lecturer upon Medicine	
FRANCIS H. MARKOE, M.D.	20 West 30th Street
Clinical Lecturer upon Surgery	

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BERN B. GALLAUDET, M.D.....	62 West 35th Street Demonstrator of Anatomy, and Clinical Lecturer upon Surgery
GEORGE C. FREEBORN, M.D.....	200 West 56th Street Instructor in Normal Histology
IRA T. VAN GIESON, M.D.....	437 West 59th Street First Assistant in Normal Histology
EUGENE HODENPYL, M.D.....	127th West 58th Street Assistant in Pathology
TIMOTHY M. CHEESMAN, M.D.....	46 East 29th Street Instructor in Bacteriology
JOHN S. ELY, M.D.....	107 West 74th Street Assistant in Pathology, and Acting Curator of the Museum
WALTER B. JAMES, M.D.....	33 West 39th Street Clinical Lecturer upon Medicine
JOHN B. LYNCH, M.D.....	438 West End Avenue Second Assistant in Normal Histology
ERVIN A. TUCKER, M.D.....	{ Sloane Maternity Hospital 59th St. and 10th Ave.
Instructor in Practical Obstetrics	
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LUCIUS W. HOTCHKISS, M.D.....	30 East 35th Street Assistant Demonstrator of Anatomy
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GEORGE E. BREWER, M.D.....	48 East 31st Street Assistant Demonstrator of Anatomy
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JOSEPH A. BLAKE, M.D.....	437 West 59th Street Assistant Demonstrator of Anatomy
ROBERT A. SANDS, M.D.....	39 East 33d Street Assistant Demonstrator of Anatomy
JOSEPH A. DEGHUÉE, Ph.D.....	437 West 59th Street Assistant Demonstrator of Chemistry and Physics

NAMES	RESIDENCES
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Third Assistant in Normal Histology	
WINFIELD JOHNSON, Ph.G.	437 West 59th Street
Assistant in Chemistry and Physics	

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VENEREAL DISEASES*Chief of Clinic*

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EDMOND Y. HILL, M.D.

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JOHN B. STEIN, M.D.

EDWARD THOMAS BOAG,

Registrar of the College

ANNOUNCEMENT FOR 1893-94

Beginning with the academic year 1894-5, the studies in Medicine leading to the degree of Doctor of Medicine, will constitute a required four years' course. All necessary particulars in relation to the course will be given in detail in the circular of next year.

The College of Physicians and Surgeons, on July 1st, 1891, became, under the authority of the Legislature, a part of Columbia College. This merger, which makes the medical department in a complete sense an integral part of the university system, largely increases the usefulness of the medical school, favors the thoroughness of scientific medical education, and promotes scientific research. The accessions to the teaching force, notably in the department of anatomy and in the physiological, pathological, and chemical laboratories, permit the realization, to a degree hitherto quite impossible, of the great opportunities for instruction and research afforded by the excellence of the dissecting rooms, the laboratories, and apparatus.

The college occupies a group of buildings, given by the late William H. Vanderbilt and his family, and by William D. Sloane, Esq., which stand upon thirty contiguous lots of land, bounded on the south, west, and north by Fifty-ninth Street, Tenth Avenue, and Sixtieth Street, respectively, and lying immediately opposite to the Roosevelt Hospital.

The station, which is a few steps from the college, at the corner of Fifty-ninth Street and Ninth Avenue, is the point of union of the Ninth Avenue and Sixth Avenue Elevated Railroads, by either of which the buildings are immediately accessible from the north and south.

The "across-town" horse-cars of the Belt-line Surface Railway move east and west along Fifty-ninth Street, pass the site of the

college, and place it in easy communication with the Second and Third Avenue Elevated roads, and with the numerous lines of horse-cars which reach Fifty-ninth Street from the north and south. All important points in the city, including the various hospitals, can thus readily be reached from the college without a walk of any length.

The buildings appertaining to the college are three in number:

THE COLLEGE BUILDING PROPER ;
THE VANDERBILT CLINIC ;
THE SLOANE MATERNITY HOSPITAL.

THE COLLEGE BUILDING PROPER has been designed to facilitate that combination of didactic instruction with laboratory work which is essential to a modern scientific training. It consists of a *southern portion*, measuring 140 feet by 43 feet, extending along Fifty-ninth Street ; of a *northern portion*, 96 feet by 43 feet, extending along Sixtieth Street ; and of a *middle portion*, 96 feet by 55 feet, connecting the other two. The total area covered is therefore 15,428 feet. Each story above the basement of the northern and southern portions has been built "in the clear," and contains neither brick partitions nor iron columns. It is therefore possible to remodel the interior at any future time.

Vanderbilt Clinic

THE VANDERBILT CLINIC is upon the land given to the college at the corner of Sixtieth Street and Tenth Avenue, and is connected with the college building proper by a covered way.

This institution, which has been built and endowed by the sons of the late William H. Vanderbilt as a memorial of their father, provides a fully equipped dispensary service for the sick poor ; and for the college, whose professors have entire charge of its practice, a field for extended and practical clinical instruction and research in all branches.

Besides its *dispensary department*, the building contains numerous *small rooms* for the direct practical teaching of diagnosis and treatment to groups of learners, and a *theatre*, for clinical lectures, which accommodates an audience of nearly four hundred. During the year 1892, 121,471 patients were treated at this institution, of which 35,657 were new patients.

Sloane Maternity Hospital

THE SLOANE MATERNITY HOSPITAL is upon the college land at the corner of Fifty-ninth Street and Tenth Avenue.

This is a lying-in hospital of forty-five beds, given by William D. Sloane, Esq., whose wife, a daughter of the late William H. Vanderbilt, has endowed the institution by making all of its beds free in perpetuity.

The obstetric service here is under the exclusive direction of the professor of midwifery at the college, the instructor in obstetrics being the resident physician. The members of the graduating class are required each to attend, in the hospital, a certain number of cases of labor.

The students of the third year are divided, at the beginning of the term, into sections of six, each section remaining on duty for one week ; during this time they are furnished with rooms in the dormitory free of charge. These lodgings are upon the college grounds, and connected with the hospital by electric wires, so that students are quickly summoned to emergency cases. Beside, instruction is given during the week by the resident physician, and at its close an examination is held in the hospital by the Instructor in Obstetrics on the work of the week.

From the time of the opening of the hospital to May, 1893, a period of five years and four months, 2,700 deliveries have taken place. These, with their proper proportion of obstetric operations and with the subsequent treatment of women and infants, have afforded invaluable bedside experience, such as is offered at no other medical school in this country.

Admission

1 Applicants for matriculation who declare themselves in writing not to be candidates for the degree of doctor in medicine from this college are admitted, without further formality, to matriculation as special students. Such applicants cannot subsequently become candidates for graduation at this college without full compliance with the terms of admission and graduation as set forth in this catalogue.

2 To all persons who matriculate with the intention of becoming candidates for the degree of doctor in medicine, *at any medical school in the State of New York*, the following provisions of law are now applicable, viz.:

Practice of Medicine

Laws of New York, 1893, ch. 661

Previous laws relating to the practice of medicine were repealed May 9, 1893, when this new law took effect.

§ 141 **State boards of medical examiners.**—There shall continue to be three separate state boards of medical examiners of seven members each, each of whom shall hold office for three years from August 1 of the year in which appointed. One board shall represent the Medical Society of the State of New York, one the Homeopathic Medical Society of the State of New York, and one the Eclectic Medical Society of the State of New York. Each of these three societies shall at each annual meeting nominate twice the number of examiners to be appointed in that year on the board representing it. The names of such nominees shall be annually transmitted under seal by the president and secretary prior to May 1 to the regents, who shall, prior to August 1, appoint from such lists the examiners required to fill any vacancies that will occur from expiration of term on August 1.

§ 145 **Admission to examination.**—The regents shall admit to examination any candidate who pays a fee of \$25.00 and submits satisfactory evidence, verified by oath if required, that he :

(1) Is more than twenty-one years of age ; (2) is of good moral character ; (3) has the general education required in all cases after August 1, 1895, preliminary to receiving the degree of bachelor or doctor of medicine in this State ; (4) has studied medicine not less than three full years, including three satisfactory courses, in three different academic years, in a medical school registered as maintaining at the time a satisfactory standard ; (5) has either received the degree of bachelor or doctor of medicine from some registered medical school, or a diploma or license conferring full right to practise medicine in some foreign country.

The degree of bachelor or doctor of medicine shall not be conferred in this State before the candidate has filed with the institution conferring it, the certificate of the regents that three years before the date of the degree, or before or during his first year of medical study in this State, he had either graduated from a registered college or satisfactorily completed not less than a three years' academic course in a registered academy or high

school ; or had a preliminary education considered and accepted by the regents as fully equivalent ; or had passed regents' examinations in arithmetic, elementary English, geography, spelling, United States history, English composition, and physics. Students who had matriculated in New York medical school before June 5, 1890, shall be exempt from this preliminary education requirement, provided the degree be conferred before August 1, 1895.

The regents may in their discretion accept as the equivalent for any part of the third and fourth requirement, evidence of five or more years' reputable practice of medicine, provided that such substitution be specified in the license.

§ 146 **Questions.**—Each board shall submit to the regents, as required, lists of suitable questions for thorough examination in anatomy, physiology and hygiene, chemistry, surgery, obstetrics, pathology and diagnosis, and therapeutics including practice and materia medica. From these lists the regents shall prepare question papers for all these subjects, which at any examination shall be the same for all candidates, except that in therapeutics, practice, and materia medica all the questions submitted to any candidate shall be chosen from those prepared by the board selected by that candidate, and shall be in harmony with the tenets of that school as determined by its state board of medical examiners.

§ 147 **Examinations and reports.**—Examinations for license shall be given in at least four convenient places in this state and at least four times annually, in accordance with the regents' rules, and shall be exclusively in writing and in English. Each examination shall be conducted by a regents' examiner, who shall not be one of the medical examiners. At the close of each examination the regents' examiner in charge shall deliver the questions and answer papers to the board selected by each candidate, or to its duly authorized committee, and such board, without unnecessary delay, shall examine and mark the answers and transmit to the regents an official report, signed by its president and secretary, stating the standing of each candidate in each branch, his general average, and whether the board recommends that a license be granted. Such report shall include the questions and answers and shall be filed in the public records of the University. If a candidate fails on first examination, he may, after not less than six months' further study, have a second examination without fee.

If the failure is from illness or other cause satisfactory to the regents, they may waive the required six months' study.

§ 148 **Licenses.**—On receiving from a state board an official report that an applicant has successfully passed the examinations and is recommended for license, the regents shall issue to him, if in their judgment he is duly qualified therefor, a license to practise medicine. Every license shall be issued by the University under seal, and shall be signed by each acting medical examiner of the board selected, and by the officer of the University who approved the credential which admitted the candidate to examination, and shall state that the licensee has given satisfactory evidence of fitness as to age, character, preliminary and medical education, and all other matters required by law, and that after full examination he has been found properly qualified to practise. Applicants examined and licensed by other state examining boards registered by the regents as maintaining standards not lower than those provided by this article, and applicants who matriculated in a New York state medical school before June 5, 1890, and who receive the degree M.D. from a registered medical school before August 1, 1895, may, without further examination, on payment of \$10 to the regents and on submitting such evidence as they may require, receive from them an indorsement of their licenses or diplomas conferring all rights and privileges of a regents' license issued after examination.

149 **Registry.**—Every license to practise medicine shall, before the licensee begins practice thereunder, be registered in a book kept in the clerk's office of the county where such practice is to be carried on, with name, residence, place and date of birth, and source, number, and date of his license to practise. Before registering, each licensee shall file, to be kept in a bound volume in the county clerk's office an affidavit of the above facts, and also that he is the person named in such license, and had, before receiving the same, complied with all requisites as to attendance, terms, and amount of study and examinations required by law and the rules of the University as preliminary to the conferment thereof; that no money was paid for such license, except the regular fees paid by all applicants therefor; that no fraud, misrepresentations, or mistake in any material regard was employed by any one or occurred in order that such license should be conferred. Every

license, or if lost, a copy thereof legally certified so as to be admissible as evidence, or a duly attested transcript of the record of its conferment shall, before registering, be exhibited to the county clerk, who, only in case it was issued or indorsed as a license under seal by the regents, shall indorse or stamp on it the date and his name preceded by the words: "Registered as authority to practise medicine in the clerk's office of . . . county." The clerk shall thereupon give to every physician so registered a transcript of the entries in the register with a certificate under seal that he has filed the prescribed affidavit. The licensee shall pay to the county clerk a total fee of one dollar for registration, affidavit, and certificate.

Every person to whom this law applies, must, in pursuance thereof, before he can be admitted to final examination for the degree of M.D., file with the Secretary of the Faculty a MEDICAL STUDENT'S CERTIFICATE OF THE REGENTS OF THE UNIVERSITY OF THE STATE OF NEW YORK.

The conditions to be fulfilled in order to obtain this certificate are as follows:

A—Certificates without Examination

Candidates for a medical student's certificate having credentials which can be accepted in place of an examination under the act, must send their credentials to "UNIVERSITY EXAMINATIONS DEPARTMENT, ALBANY, N. Y." They will be examined and returned at once, and, if accepted, a medical student's certificate will be sent with them. If the certificate be delayed for verification of the candidate, when issued, it will be dated from receipt of the candidate's application, so that the candidate will lose no time.

The credentials, beside those referred to in the law, which the Regents accept in place of an examination under the act, may be ascertained by written application addressed to "UNIVERSITY EXAMINATIONS DEPARTMENT, ALBANY, N. Y."

B—Examinations under the Act

 *N.B.—Candidates should notify the Regents' office at Albany at least ten days in advance, stating at what time and in what studies*

they must be examined. They will at once be assigned the most convenient time and place.

Any person who does not obtain a medical student's certificate without examination, according to section A, must pass the examinations named in the law, or their equivalents, as allowed by the Regents, and referred to under section A.

The times, places, and subjects of these examinations are set forth below. *On the dates specified, examinations will be held entirely under the charge of the Regents.*

Curriculum

N.B.—For the establishment of a required four years' course beginning October 1, 1894, see page 7.

Beginning with commencement, the college year consists of a period of vacation, extending to the first Monday in October, and of an annual session of between eight and nine months, extending from the latter time to the following commencement, which is held in common with the other departments of COLUMBIA COLLEGE during the second week in June.

The session of 1893-94 will begin upon Monday, October 2, 1893, at 10 A.M.

During the session the exercises will be suspended upon the legal holidays, February 7th, Ash Wednesday, and March 23d, Good Friday; from 1 P.M. of the day before Thanksgiving day to the following Monday morning; from December 23d, at 1 P.M., to January 6th, inclusive.

The work required of the students at this college who are candidates for the degree of M.D. is distributed over three years of study, according to the curriculum set forth below.

Obligatory Exercises of the Regular Curriculum

N.B.—Certificates that all the required practical work has been performed in a manner satisfactory to the Instructors in charge must be presented prior to final examination.

First Year

Didactic Lectures or Demonstrations in : 1, Anatomy. 2, Physiology. 3, Physics and Chemistry.

Practical Work in : 1, Dissection. 2, Normal Histology. 3, Physiological and Medical Chemistry.

Second Year

Didactic Lectures or Demonstrations in : 1 Anatomy. 2 Physiology. 3 Physics and Chemistry. 4 Materia Medica and Therapeutics, including Hygiene. 5 Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System. 6 Principles and Practice of Surgery. 7 Obstetrics and Gynecology.

Dissection

Clinics at the Vanderbilt Clinic in : 1 General Medicine. 2 General Surgery.

Practical Clinical Work in : 1 General Medicine. 2 General Surgery.

Third Year

Didactic Lectures in : 1 Materia Medica and Therapeutics, including Hygiene. 2 Pathology and Practical Medicine, including Diseases of the Mind and Nervous System. 3 Principles and Practice of Surgery. 4 Obstetrics and Gynecology. 5 Ophthalmology.

Clinics at the Vanderbilt Clinic in : 1 Diseases of the Mind and Nervous System. 2 Gynecology. 3 Diseases of Children. 4 Venereal Diseases. 5 Diseases of the Skin. 6 Diseases of the Throat. 7 Diseases of the Eye. 8 Diseases of the Ear.

Practical Work in Pathology and Pathological Histology.

Practical Clinical Work in Obstetrics.

N. B.—In the eight subjects enumerated above under the head of “clinics” practical clinical work may be pursued during the third year as an optional study, without extra charge.

Graduation

For candidates for the degree of M.D. the requirements for graduation are as follows, viz :

I A. Candidates who are not already graduates in medicine of recognized institutions must have pursued the regular three years' curriculum at this college ; or the regular curriculum of the second and third years at this college, and such a course at some other medical school as shall have been recognized by the faculty as an equivalent for the first year's curriculum at this college.

No course at another medical school will be so recognized which shall have begun during the same calendar year as that in

which the student who shall have attended it shall have entered this college.

B. Graduates in medicine of recognized institutions must have pursued at this college at least the regular curriculum of the third year.

2 All candidates, whether already graduates in medicine or not, must pass at this college examinations satisfactory to the Faculty in: 1 Anatomy; 2 Physiology; 3 Physics and Chemistry; 4 Materia Medica and Therapeutics, including Hygiene; 5 the Practice of Medicine, including the Diseases of the Mind and Nervous System; 6 Principles and Practice of Surgery; 7 Obstetrics and Gynecology; 8 Clinical Studies; 9 Normal Histology, Pathology, and Bacteriology.

See section headed "EXAMINATIONS."

3 Candidates must present satisfactory evidence of good moral character and of having attained the age of twenty-one years.

4 Candidates must present satisfactory evidence of having complied with the requirements for admission.

See section headed "ADMISSION."

Examinations

The professional examinations are practical and in writing, and are held immediately after the close of the lectures of the college year.

The examinations in the topic of "Clinical Studies" comprise one question in each of the following subjects, set by the clinical professor thereof:

1 Venereal Diseases; 2 Diseases of Children; 3 Diseases of the Eye; 4 Diseases of the Ear; 5 Diseases of the Throat; 6 Diseases of the Skin.

With the exception of such graduates in medicine as attend at this college only the third year of the curriculum, candidates, if they so elect, are eligible for examination in any or all of the three branches of: 1 Anatomy; 2 Physiology; and 3 Physics and Chemistry, and upon these only, on completing the first two years of the curriculum.

The following new rules to govern examinations have been adopted by the Faculty, to take effect in May, 1894, viz.:

- 1st—The system of giving to students “examination numbers” is abolished, and hereafter each candidate will be examined and voted upon by name.
- 2d—In addition to the eight subjects upon which examinations are now held, there will be a ninth, and this will include an examination upon all the work required in the laboratories that are under the direction of Prof. Prudden. This examination will be conducted by him and his assistants.
- 3d—The maximum mark will be ten instead of eight, as at present.
- 4th—No student will be allowed to pass in any subject unless he shall have received a mark of at least six.
- 5th—No student will be compelled to be examined a second time upon any subject if he shall have received a mark of six at any examination upon that subject.
- 6th—If any student fail to attain a mark of six in any department, he will be declared conditioned in that department.
- 7th—Conditioned candidates will not be allowed more than two subsequent examinations in the subjects upon which they have been conditioned; and at each of these examinations they will be examined in all of the subjects in which they have been conditioned.
- 8th—Candidates conditioned at the spring examination may present themselves for re-examination in October. If again conditioned, they may come up for their final examination in the following spring, at the regular College examination. If they fail at this time to receive a mark of six in any subject, they will not be subsequently re-examined.
- 9th—Candidates who fail to present themselves for re-examination at one or the other of the two times just specified, succeeding their original condition, will be deemed to have waived their right to re-examination; and no student will be allowed to postpone for more than one year the examinations upon conditioned subjects.
- 10th—Students must pass a satisfactory examination in every subject before they are recommended for the degree of Doctor in Medicine.

11th—In determining the examination mark the professors of Anatomy, Chemistry, Practice of Medicine, Surgery, and Obstetrics will give due weight to the practical work of the student in their several departments.

12th—If any student, presenting himself for examination the first time, fails to pass in three or more subjects, he will be considered as *rejected*, and will not be permitted to be re-examined until the following spring. Rejected students may be examined twice, at the discretion of the Faculty, but not a third time.

INSTRUCTION

The teaching at this college comprises didactic and clinical lectures and demonstrations; practical clinical instruction given to groups of students; and laboratory work.

I—Lectures and Demonstrations

Didactic lectures and demonstrations, including those in which the magic-lantern is used, are given throughout the college year on the following subjects, viz.: 1 *Anatomy*. 2 *Physiology*. 3 *Physics and Chemistry*. 4 *Materia Medica, Therapeutics, and Hygiene*. 5 *Obstetrics and the Diseases of Women*. 6 *Surgery*. 7 *Pathology and Practical Medicine, including the Diseases of the Mind and Nervous System*. 8 *Ophthalmology*.

CARTWRIGHT LECTURES OF THE ALUMNI ASSOCIATION—According to the provisions of the Cartwright Trust, there is biennially given, under the auspices of the Alumni Association, a course of lectures more especially addressed to graduates in medicine. This course was delivered, during the session of 1891-92, by HENRY F. OSBORN, SC.D., Da Costa Professor of Biology in Columbia College, upon *Present Problems of Evolution and Heredity*.

Clinics

Eleven clinics are given each week at the VANDERBILT CLINIC, as follows:

Surgical—Professors Bull and Weir; Mondays, 12 M.

Diseases of the Ear—Professor Buck ; Clinical Instruction in Sections ; Mondays, 2 P.M.

Diseases of the Skin—Professor Fox ; Mondays, 3 P.M.

Diseases of the Throat and Nose (with laryngoscopic and rhinoscopic demonstrations)—Professor Lefferts ; Tuesdays, 2 P.M.

Diseases of the Eye—Professor Knapp ; Tuesdays, 3 P.M.

Diseases of Children—Professor Jacobi ; Wednesdays, 2:30 P.M.

Venereal Diseases—Professor Taylor ; Thursdays, 2 P.M.

Medical—Professor Delafield ; Thursdays, 3 P.M.

Diseases of the Mind and Nervous System—Professor Starr ; Fridays, 2 P.M.

Diseases of Women—Professor Tuttle ; Fridays, 3 P.M.

Hospital Clinics

Beside the college clinics, the general and special hospitals of New York afford most important fields for clinical teaching. This college is strongly represented on the staffs of these institutions, and regular clinical instruction at hospitals is made a prominent feature of the curriculum. *Admission is free* to all matriculated students. At all the following hospitals instruction is given by officers of the college.

SLOANE MATERNITY HOSPITAL, corner of Fifty-ninth Street and Tenth Avenue.—See page 9.

ROOSEVELT HOSPITAL—This has long been the seat of thorough clinical work, and has become of special importance in this respect from its position immediately opposite the new buildings of the college upon Fifty-ninth Street, between Ninth and Tenth Avenues. Moreover, this hospital has lately received a bequest of several hundred thousand dollars, for the erection and endowment of a new surgical operating theatre, which has been completed and now offers unrivalled facilities for instruction in this department.

The Roosevelt is a general hospital of one hundred and eighty beds, and it also possesses a flourishing out-patient department.

Public clinics are given here as follows, throughout the college session :

Medical—Mondays, at 4 P.M., Professors Delafield and Draper, and Dr. Roosevelt.

Surgical—Saturdays, at 2:30 P.M., Professor McBurney.

Gynecological—Every week day except Friday, at 2:30 P.M.. Professor Tuttle. Admission, by invitation, to operations.

NEW YORK HOSPITAL, Fifteenth Street, between Fifth and Sixth Avenues—Reached from the college by taking the Sixth Avenue Elevated Railroad at the corner of Ninth Avenue and Fifty-ninth street, and leaving the cars at the corner of Fourteenth Street and Sixth Avenue.

This is a general hospital of the highest class, of one hundred and fifty beds, with an out-patient department.

The public clinics are the—

Medical—Mondays and Thursdays, at 2:30 P.M.; Professor Peabody.

Surgical—Thursdays, 2:30 P.M., Dr. Hartley; Wednesdays and Saturdays, 2:30 P.M., Professors Weir and Bull.

BELLEVUE HOSPITAL, Twenty-sixth Street and East River—Directly accessible from the college by the horse-cars of the Belt Line, which run from the door of the college to that of the hospital; or, by leaving the horse-car at the corner of Fifty-ninth Street and Third Avenue, and taking the Third Avenue Elevated train to the corner of Third Avenue and Twenty-eighth Street.

The service of this hospital and of its out-patient department covers a great range of practice.

The following clinics are held here throughout the session:

Medical—Tuesdays, 1:30 P.M., Professor Jacobi, and Drs. Roosevelt and James.

Surgical—Thursdays, 2:30 P.M., Drs. F. H. Markoe and Gallaudet.

Diseases of Children—Mondays, 2:30 P.M., from April to June, Professor Jacobi.

ST. LUKE'S HOSPITAL, Fifth Avenue and Fifty-fifth Street.

Surgical—Dr. F. H. Markoe gives a clinic to which students are admitted, on Fridays at 2:30 P.M., from August to February.

CHARITY HOSPITAL, Blackwell's Island, East River—To reach this institution the steamer should be taken at the foot of East Fifty-second Street. This hospital offers a peculiarly rich field for the study of venereal diseases, over two thousand such cases being received yearly. Dr. Hayden gives a clinic from October to March, inclusive, as follows:

Venereal—Wednesdays, 2 P.M.

NEW YORK CANCER HOSPITAL, One Hundred and Sixth Street

and Eighth Avenue—Elevated Railroad station, One Hundred and Fourth Street and Ninth Avenue. Can be reached also by the Eighth Avenue surface road.

One clinic a week is held here, viz. :

Surgical—Thursdays, 2:30 P.M., Dr. B. F. Curtis.

NEW YORK OPHTHALMIC AND AURAL INSTITUTE, 46 East Twelfth Street—Reached by the Sixth Avenue Elevated train, which should be left at the Fourteenth Street station.

This hospital has thirty beds, and a large daily dispensary service is held for diseases of the eye and ear. Throughout the session the following clinic is held :

Ophthalmological—Saturdays, 2:30 to 5 P.M., Professor Knapp (admission by invitation of Sections). Selected cases for diagnosis ; the most important operations on the eye.

Demonstrations of Pathological Anatomy

The numerous autopsies which occur at the Roosevelt, New York, Bellevue, and Charity Hospitals, during the session, take place before the students usually at regular hours, and the hospital pathologists demonstrate and explain the lesions discovered. Whenever autopsies are to occur at these institutions, timely notice is posted upon the bulletin-board of the college.

The hours for autopsies are as follows :

Roosevelt Hospital—3 P.M., Dr. Hodenpyl.

New York Hospital—2 P.M.

Bellevue Hospital.—1 P.M., Dr. Ely.

Charity Hospital.—Dr. Van Gieson, on Thursdays and Saturdays.

II—Practical Clinical Instruction

One of the greatest advantages secured to the college by the founding of the Sloane Maternity Hospital and the Vanderbilt Clinic is the possibility of organizing a system of practical clinical teaching whereby each member of numerous small classes may be brought into direct personal contact with the cases under examination.

An outline is appended of the instruction proposed upon this plan, which is given by the clinical lecturers and their assistants.

GENERAL MEDICINE—Physical diagnosis. *Required.*

GENERAL SURGERY—Diagnosis and treatment, including minor surgery, bandaging, etc. *Required.*

MIDWIFERY—Attendance upon cases of labor, at the Sloane Maternity Hospital, by advanced students, under the direction of the obstetricians of the hospital (see page 9). *Required.*

GYNECOLOGY—Practical instruction in diagnosis and treatment, including the use of instruments. *Optional.*

DISEASES OF CHILDREN—Diagnosis and treatment. *Optional.*

VENEREAL DISEASES—Diagnosis and treatment. *Optional.*

DISEASES OF THE NERVOUS SYSTEM—Examination of cases, including electrical tests; diagnosis and localization of lesions: electro-therapeutics. *Optional.*

DISEASES OF THE SKIN—Diagnosis and treatment. *Optional.*

DISEASES OF THE EYE—Diagnosis, including the tests for errors of refraction and accommodation and the use of the ophthalmoscope, and treatment. *Optional.*

DISEASES OF THE EAR—Diagnosis and treatment. *Optional.*

DISEASES OF THE THROAT AND NOSE—Use of the laryngoscope and rhinoscope. Exercises on laryngoscopic phantom. Examination of cases. Diagnosis of ordinary affections of the throat and nose. *Optional.*

III—Laboratory Work

PHYSIOLOGY—The regular instruction in Physiology consists in a course of lectures and demonstrations by Professor Curtis, and a course of demonstrations by Dr. Lee; the two courses maintaining an organic connection with one another.

The physiological laboratory has an unusually complete equipment, especially for work in physical physiology. The collection constitutes the Swift Physiological Cabinet, and consists of physiological apparatus of the latest models, by the best makers, given, together with provision for its increase, by the late James T. Swift, formerly a trustee of the Medical School, as a memorial of his brother, the late Foster Swift, M.D., a graduate of the class of 1857.

A steam plant furnishes the power needed to drive recording and other scientific instruments, and for the lathes. A competent mechanic devotes his entire time to the manufacture of special pieces of apparatus, and to necessary alterations and repairs.

The laboratory is designed to place within the reach of a cer-

tain number of graduates, or other advanced workers, such opportunities for original research, under the direction of the professor and demonstrator, as have not until lately been attainable in New York, but are commonly sought for at European universities. Personal instruction, aid, and advice as to subjects and methods of work are given. The Professor and Demonstrator of Physiology are not practitioners, but devote their entire time to physiological work at the college. It is desired that the department, through its workers, may constantly help in the advancement of physiological science.

OPERATIVE SURGERY UPON THE CADAVER—Frank Hartley, M.D., Surgeon to the New York and Cancer Hospitals, and Assistant Surgeon to the Roosevelt Hospital, gives special instruction in this branch in the college building from October 15th to May 1st. All the operations that can be practised properly upon the cadaver are done in each course, by the members of the class. Class members, 6; lessons, 13 or 14, of from $1\frac{1}{2}$ to 2 hours each.

ANATOMY—The instruction in anatomy is conducted by lectures, demonstrations, and practical work in the Anatomical laboratory. Such subjects as cannot be demonstrated to a large number of students at once in the general lecture, are included in the course of demonstrations. In this course, the students of the 1st and 2d years are divided into small sections, each member of such section being enabled to have in hand and inspect the preparations forming the subject of the demonstration.

The anatomy of the distal portions of the extremities, central nervous system, osteology of the head, special sense organs, etc., are taught in this manner.

Every student is required to dissect, and the unusual size and thorough equipment of the department of practical anatomy at the new building command special attention.

The dissecting room is open all day from October 1st to May 1st, and the demonstrators are present during the mornings, afternoons, and evenings.

A valuable feature is the "Bone-Room," on the first floor of the college, contiguous to the students' reading-room. Here a large number of disarticulated skeletons are kept, and the separate bones are lent for study, as books are lent from a circulating library.

The completion, during the past year, of the new anatomical laboratory for research work, enables the department to offer exceptional advantages to advanced students in morphology.

The arrangements for obtaining comparative anatomical and embryonic material have been perfected during the past year, and an abundance of such material can be placed at the disposal of qualified advanced workers.

PHYSIOLOGICAL AND MEDICAL CHEMISTRY—Practical instruction is given in the chemical laboratory, on four afternoons of each week, by the Demonstrator of Chemistry and Physics, Charles E. Pellew, E.M., under the direction of the Professor of Chemistry.

The laboratory is newly equipped with microscopes, as well as with spectroscopes, and the necessary chemical apparatus.

The regular instruction is limited to students of the first year, who are enrolled in two divisions. The second division has access to the chemical laboratory during the first half of the session, during which time the first division is occupied with normal histology.

During the second half of the session the first division attends in the chemical laboratory, and the second in that of normal histology.

The division in attendance on practical chemistry is subdivided into two sections, of which one works in the chemical laboratory on Tuesdays and Wednesdays, and the other on Thursdays and Fridays; in each case from 2 to 4 P.M. Special students are also received.

The instruction includes: The preparation and study of typical animal and vegetable substances, such as the carbohydrates, the fats, the proteids, and of the inorganic matters of most importance, including the commonest acids, bases, and salts; distillation; fermentation; artificial digestion; the sanitary analysis of drinking water; and the properties of blood, milk, bile.

The last portion of the course is devoted to the microscopical and chemical examination of urine. Quantitative methods are taught in this as far as practicable, and the students are required to examine carefully numerous samples of pathological urines collected from the various hospitals and clinics of the city.

The microscope is brought into use wherever of value in connection with chemical work.

A special optional course (free) of some twenty-five lectures on medical chemistry is given by the Demonstrator to each division of the class. These lectures include discussions of the composition, occurrence, preparation, properties, and uses of the various substances experimented on, and also full and detailed descriptions of the different tests made in the laboratory.

THE DEPARTMENT OF PATHOLOGY, embracing the laboratories of *Normal Histology, Pathological Anatomy, and Histology and Bacteriology*, founded in 1878 by the Alumni Association of the College of Physicians and Surgeons, and the Pathological Museum, now occupy the second and the fifth stories, and a part of the fourth story of the laboratory wing of the college building. The lofty fifth story, added during the last summer, forms one large, well lighted laboratory, measuring about forty feet by ninety, which can be divided into two sections by a sliding partition, and which is devoted to the regular class-work.

By the increase in space and light which this new laboratory affords, and its abundant equipment with new microscopes as well as by the transference of the museum to the neighborhood of the laboratories, the work in this department is greatly facilitated.

Systematic practical instruction in pathological anatomy and histology and bacteriology is given to third-year students, by Professor T. Mitchell Prudden, director of the laboratories, assisted by Drs. Eugene Hodenpyl and John Slade Ely, on Mondays, Fridays, and Saturdays, from 9 to 11 A.M. The first division of the class will receive this instruction during the first half of the session; the second division during the last half.

Instruction in normal histology is given by Dr. George C. Freeborn, assisted by Drs. Ira T. Van Gieson, J. B. Lynch, and James Ewing. This course is arranged for first-year students. During the first half of the session, the first division of the class will meet from 2 to 4 P.M. on Tuesdays, Wednesdays, Thursdays, and Fridays. During the second half of the session, the second division of the class will meet at the same hours.

In the above courses the student is taught the methods of preparing and studying normal and diseased tissues and organs, and makes for his own future use collections of microscopical specimens, from which he prepares in the laboratory a series of outline sketches. Microscopes and reagents are furnished by the laboratory.

Special practical instruction is given, by Dr. Freeborn, in microscopical technology, by Dr. Van Gieson in the normal and pathological histology of the nervous system and the eye ; and by Dr. Cheesman in bacteriology.

Abundant opportunity is afforded to practitioners of medicine and others to make special studies or original investigations in experimental pathology, bacteriology, and other themes taught in the laboratory. To the special workers the laboratory is open at all hours of the day.

Text-Books and Instruments

The following list comprises the text-books and instruments recommended.

For the convenience of those who wish to reckon up their expenses in advance, there are appended the lowest prices at which the books, in cloth bindings, can be purchased in New York. These prices are liable to fluctuations. As a rule, the latest editions only of text-books should be purchased.

Gray's Anatomy, \$4.80 ; *or* Quain's Anatomy, new edition not yet completed ; Foster's Physiology, \$3.60 ; Fownes' Chemistry, \$2.20 ; Ganot's Physics, \$4 ; Pellew's Medical and Physiological Chemistry, \$2 ; H. C. Wood's Therapeutics, \$4.80 ; E. Curtis' General Medicinal Technology, 80 cents ; Hare's Practical Therapeutics, \$3 ; Senn's Principles of Surgery, \$4.50 ; Treves' Manual of Surgery, \$4.80 ; American Text-Book of Surgery, \$7 ; Ruyter and Kirchoff, Manual of Surgery ; Playfair's Midwifery, \$3.20 ; *or* Lusk's Midwifery, \$4 ; August Martin's Diseases of Women, *or* Hart and Barbour's Manual of Gynecology, \$5.60 ; Pepper, American Text-Book of Medicine, \$10 ; Delafield and Prudden's Pathological Anatomy and Histology, \$4.80 ; Prudden's Normal Histology, \$1 ; Ashby and Wright on the Diseases of Children, \$4.00 ; Bumstead and Taylor on Venereal Diseases, Dr. Schweinitz, Diseases of the Eye, \$4.00 ; Buck's Manual of Diseases of the Ear, \$2 ; Jackson's Handbook of Skin Diseases, \$2.20 ; Bosworth, Diseases of the Nose and Throat, \$9.60 ; Gower's Diseases of the Nervous System, 1st vol. \$2.80 ; Dana, Text-Book of Nervous Diseases, \$2.60 ; Kirchoff, Handbook of Insanity, \$2.20.

A "dissecting case," containing all the necessary instruments, can be bought for from \$3.00 to \$4.00.

Expenses

All Fees are Payable in Advance

N. B.—For all students of the present curriculum who matriculated for the first time prior to January 1, 1890, the fee for all the required exercises of the year is \$150.

The necessary expenses for graduation at this college, for a student who attends the present curriculum during three years, are as follows :

First Year

Matriculation	\$ 5
Fee for all the required exercises of the year	200
Anatomical material, \$1 each part.	

Second Year

Fee for all the required exercises of the year	\$200
Anatomical material, \$1 each part.	

Third Year

Fee for all the required exercises of the year	\$200
Graduation fee	30

Practical clinical work in eight subjects, optional and free, to all students of the third year of the new curriculum.

Fees for Special Students

Didactic lectures from each of the numbered seven chairs first enumerated under the head of "Instruction"	\$20
Dissection	10
Dissecting material, per part	1
Practical chemistry, including chemicals and breakage, per course	\$25
Laboratory course in normal histology, including materials	25
Laboratory course in pathology and pathological histology, including materials	25
Laboratory fee for special instruction in pathology or histology or bacteriology, per month	25
Operative surgery on the cadaver, including material, per course	20

For other special courses the fees must be specially arranged for with the instructors.

The clinical lectures at the VANDERBILT CLINIC are free to matriculates who do not take the regular curriculum.

The public clinical lectures, and demonstrations of pathological anatomy, which are given at the hospitals by officers of the college, are free to all matriculates.

Board

Information in regard to board can be obtained from the Secretary of the Students' Movement, through the Registrar, Mr. E. T. Boag, at his office in the college. Prices range from \$5 to \$9 per week.

Correspondence

Letters requesting information should be addressed to George M. Tuttle, M.D., Secretary of the Faculty, College of Physicians and Surgeons, 437 West Fifty-ninth Street, New York.

Hospital Appointments

By a resolution of the Commissioners of Public Charities and Correction, the faculty of this college is entitled to nominate for appointment by the commissioners, after competitive examination in the college, its proportion of members of the house staff of Bellevue Hospital; such members to be attached to that division of the said hospital which has been assigned to the care of the college.

These nominees all serve the hospital for six months in each of the three grades of junior assistant, senior assistant, and house physician or house surgeon; each one having thus a total of eighteen months' experience on the "House Staff."

Four nominations, two medical and two surgical, are made each year by the college from among its graduates under the above resolution.

One medical and one surgical assistant go on duty upon July 1st; one medical and one surgical assistant upon January 1st.

The choice as to character of service, and the time of beginning the same, is given to the successful candidates in the order of their merit.

Similar positions are filled twice in each year, by public com-

petitive examinations, open to graduates of this college, in the following institutions :

The "non-collegiate" division of Bellevue Hospital ; the New York Hospital ; the Roosevelt Hospital ; St. Luke's Hospital ; Charity Hospital ; St. Vincent's Hospital ; St. Francis' Hospital ; the German Hospital ; the Mount Sinai Hospital ; the Presbyterian Hospital ; the Woman's Hospital ; the Brooklyn Hospital ; St. Catherine's Hospital, Brooklyn ; St. Peter's Hospital, Brooklyn ; the King's County Hospital, Flatbush, L. I.

Alonzo Clark Scholarship

By the will of the late Alonzo Clark, M.D., LL.D., for many years president of the college, and professor of pathology and practical medicine, it has been placed in the power of the faculty to bestow a scholarship, with an income of about nine hundred dollars a year, for the purpose of promoting the discovery of new facts in medical science.

This has been bestowed for a period of three years, beginning October 1, 1891, upon Ira T. Van Gieson, M.D., of New York City.

Prizes

ALL PRIZES ARE PUBLICLY AWARDED AT THE COLLEGE
COMMENCEMENT

Harsen Prizes for Clinical Reports

Founded in 1859, by the late Jacob Harsen, M.D., a graduate of the college.

Three annual prizes are offered for the three best reports, in writing, by students of the College of Physicians and Surgeons, of the clinical instruction given at the New York Hospital during any four consecutive months of the year which ends on commencement day.

These reports must embrace the clinical teaching of both the visiting physician and the visiting surgeon on duty.

The prizes are as follows :

A First Prize of one hundred and fifty dollars ; a Second Prize of seventy-five dollars ; a Third Prize of twenty-five dollars.

A "Harsen Prize Medal" and a diploma are given with each prize.

Harsen Prizes for Proficiency at Examination

In consequence of the great increase in value of the Harsen Prize Fund, in addition to the three prizes above mentioned, there are awarded three

HARSEN PRIZES FOR PROFICIENCY AT EXAMINATION, VIZ :

A First Prize of five hundred dollars ; a Second Prize of three hundred dollars ; a Third Prize of two hundred dollars.

The award of these prizes is made as follows :

The ten members of each graduating class who, at their examination for the degree of Doctor in Medicine, have shown the highest proficiency in all the branches combined, receive each a diploma of "Examination Honors," and are entitled to take part in special competitive examinations, the three most meritorious competitors at which receive the first, second, and third prizes, respectively.

The competitive examinations consist :

I. Of an examination in writing, covering *all the branches* of medical teaching.

II. Of an examination upon the cadaver in *practical anatomy*, conducted by the professor of anatomy.

III. Of practical examinations in *clinical medicine* and *clinical surgery*, conducted at the hospitals by the professors of medicine and surgery respectively.

The relative merits of the competitors are decided, and the award of the prizes made, by a committee of three judges, consisting of the president of the college, the president of the Association of the Alumni, and a resident alumnus selected by them.

Fellowships of the Alumni Association

In June, 1891, the trustees, at the request of the Alumni Association of the College of Physicians and Surgeons, established three fellowships to be known as the Fellowships of the Alumni Association of the College of Physicians and Surgeons, the provision for which is made annually by the Association.

These fellowships are open to graduates of the College of Physicians and Surgeons who have shown special aptitude for scientific research in the departments of anatomy, physiology, or

pathology. They are held for a period of two years and have an annual value of five hundred dollars each. The appointments to these fellowships are made by the executive committee of the Alumni Association from candidates presented to them by the professor of anatomy, the professor of physiology and the director of the pathological laboratory.

The persons appointed to these fellowships are expected to devote themselves to scientific research in the department which they may elect, in this country, either in the schools of Columbia College, where they enjoy free tuition and the privileges of the laboratories, or in other institutions at their own expense. At the end of two years the holders of these fellowships are expected to present to the Association a thesis containing evidence of independent or original work in their special department. The next appointments to these fellowships will be made in May, 1894.

The names of the successful candidates for these fellowships will be announced at the commencement following their appointment, and will be published in the annual catalogue.

The fellowships are now held by :

F. J. Brockway, M.D.

Alexander Lambert, M.D.

William H. Park, M.D.

Alumni Association Prize

This is a biennial prize of *five hundred dollars* open for competition to the alumni of the college. It is awarded for the best medical essay submitted upon any subject the writer may select, and is open to competition in alternate years with the Cartwright prize.

If no one of the competing essays be deemed sufficiently meritorious, the prize is not awarded.

An essay, in order to be held worthy of the prize, must contain the results of original investigations made by the writer.

This prize is not awarded to any essay which is the work of more than one author, or which is at the same time submitted for another prize.

Each competitor is required to send with his essay to the Prize Committee a statement that these requirements have been complied with.

Essays in competition for the prize to be awarded at commencement, 1894, must be sent to the secretary of the Alumni Association on or before April 1, 1894.

Competing essays must each be marked with a device or motto, and accompanied by a sealed envelope, similarly marked, containing the name and address of the author.

Cartwright Prize of the Alumni Association

The prize consists of *five hundred dollars*, and is offered for competition in alternate years with the Alumni Association prize.

It is awarded on the same terms as the latter, *except that it is open to universal competition.*

Stevens Triennial Prize

Established by the late Alexander Hodgdon Stevens, M.D., formerly president of the college, on the following plan :

The prize, awarded triennially, consists of the interest yielded by the principal fund during three years, and amounts to *two hundred dollars*.

The administration of the prize is entrusted to a commission, consisting of the president of the College of Physicians and Surgeons (*ex-officio*), the president of the Alumni Association (*ex-officio*), and the professor of physiology (*ex-officio*) in the same institution.

The prize is awarded to no essay unless it include the results of original research by the writer upon the subject chosen.

In 1894 this prize will be given to the *best medical essay* submitted, upon any subject the writer may select.

The competing essays must be sent in to the president of the College of Physicians and Surgeons, New York, on or before the first day of January, 1894. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope, bearing the same device or motto, and containing the name and address of the author. The envelope belonging to the successful essay will be opened, and the name of the author announced, at the annual commencement of the college in 1894 ; at which time, also, the subjects for the next triennial prize (1897) will be announced.

This prize is open for universal competition.

Joseph Mather Smith Prize

The fund for this prize is given by the relatives, friends, and pupils of the late Dr. Smith, as a memorial of his services as professor in the college from 1826 to 1866. Under the provisions of the trust, an annual prize of *one hundred dollars* is awarded for the best essay (if sufficiently meritorious) on the subject of the year, presented by an alumnus of this college. The prize committee, consisting of the president of the college, the professor of the practice of medicine, and the president of the Alumni Association, designate each year the subject for the following year. The competing essays should be sent to the president of the college on or before March 10th, each essay signed with a device or motto, and accompanied by a sealed envelope, inscribed with the same device or motto, and containing the name of the author. The envelope of the successful essayist will be opened, and the prize awarded at the annual commencement next following.

An essay in competition for the prize to be awarded in 1894 may be upon any subject relating to hygiene, pathology, or practical medicine.

MEDICAL CLASS

SESSION OF 1892-93.

NAME.	RESIDENCE.
Burr Reeve Abbe, Jr., A.B.	<i>Connecticut</i>
Leon Jesse Adams, A.B.	<i>Massachusetts</i>
Vanderpoel Adriance, A.B.	<i>New York City</i>
Edward Gurdon Aldrich.	<i>Connecticut</i>
Archibald Fowler Alexander.	<i>New Jersey</i>
Isaac Alkus.	<i>New York City</i>
Horace Russell Allen, Jr., A.B.	<i>Indiana</i>
John Frank Waite Allen	<i>New York City</i>
Maxwell H. Allen.	<i>Texas</i>
Emil Altman.	<i>New York City</i>
Raul Amador.	<i>U. S. of Colombia</i>
Lewis Nostrand Anderson.	<i>Brooklyn, N. Y.</i>
Alfred James Andrews.	<i>Brooklyn, N. Y.</i>
Oran Purdy Andrews.	<i>Ohio</i>
Edward Henry Anthon.	<i>New York City</i>
David Fitch Armstrong, A.B.	<i>New York</i>
William Lucius Armstrong, A.B., Ph.B.	<i>New York City</i>
Thomas Hanlon Atkinson, A.B.	<i>New Jersey</i>
Alonzo Eugene Austin, Jr.	<i>Alaska</i>
Oliver Luther Austin.	<i>New York</i>
James Cook Ayer, A.B.	<i>New York City</i>
Frederick Randolph Bailey, A.B.	<i>New Jersey</i>
William Seaman Bainbridge.	<i>Brooklyn, N. Y.</i>
Edward Hill Baldwin.	<i>New Jersey</i>
Samuel Harbourne Baldwin, A.B.	<i>New Jersey</i>
Samuel Bandler, A.B.	<i>New York City</i>
George Wheelock Banning.	<i>New York City</i>
Joseph De Vere Barber.	<i>Rhode Island</i>
Herbert Luther Barker, Ph.B.	<i>New York City</i>
Charles Bartow, A.B.	<i>New York</i>
Herman Benjamin Baruch, B.S.	<i>New York City</i>
Joseph Baum, B.S.	<i>New York City</i>
Arthur Loring Beals, A.B.	<i>Massachusetts</i>

NAME.	RESIDENCE.
Alfred Bell.....	<i>Brooklyn, N. Y.</i>
Harry Leach Bender.....	<i>New York City</i>
Harry Raymond Bennett.....	<i>Connecticut</i>
Charles Sylvester Bentley.....	<i>New York City</i>
Albert Ashton Berg, A.B.....	<i>New York City</i>
Otto Christian August Bindewald, M.D.....	<i>New York City</i>
James Bishop, Jr., A.B.....	<i>New Jersey</i>
William Josiah Blalock, A.B.....	<i>Georgia</i>
Alexander Maxwell Blasdell.....	<i>Brooklyn, N. Y.</i>
Frederick Bleil, A.B.....	<i>New York City</i>
John Henri Blot.....	<i>New York City</i>
Charles Ridgway Blundell, B.S.....	<i>New Jersey</i>
Louis Albert Sayre Bodine.....	<i>New York City</i>
Martin Laurence Bodkin.....	<i>Brooklyn, N. Y.</i>
William John Bohlk.....	<i>New York City</i>
Adolph Bonner.....	<i>New Jersey</i>
Charles Hurbert Borden.....	<i>New Jersey</i>
John Gerard Louis Borgmeyer, B.S.....	<i>New Jersey</i>
William Lincoln Bosserman.....	<i>New York</i>
Franklin Fleetwood Bowyer.....	<i>New York City</i>
John Newton Boyce.....	<i>New York</i>
James Van Wagner Boyd.....	<i>New York City</i>
William Augustus Boyd, Jr.....	<i>New York City</i>
Arthur Irving Boyer.....	<i>New York City</i>
Bernard Ira Bradford.....	<i>Wisconsin</i>
Harry Merritt Bradley, B.S.....	<i>Iowa</i>
William Little Bradley, A.B.....	<i>New York</i>
Arthur Richard Braunlich, Ph.G.....	<i>Brooklyn, N. Y.</i>
Nathan Breiter, M.D.....	<i>New York City</i>
Everett Clifton Brennand.....	<i>Massachusetts</i>
Marks Bresler.....	<i>New York City</i>
John Thomas Brosnan, A.B.....	<i>Brooklyn, N. Y.</i>
Elias Galley Brown, Jr.....	<i>New York City</i>
Edward Wells Brown.....	<i>Wisconsin</i>
Harvey Langdon Brown.....	<i>New York</i>
Joseph Douglas Brown, Ph.B.....	<i>New York City</i>
Barton Wilbur Brush.....	<i>New York</i>
Samuel Adolph Buchenholz.....	<i>New York City</i>
Clarence Whitfield Buckmaster.....	<i>New York</i>
William Edward Buist.....	<i>Tennessee</i>
William Duff Bullard.....	<i>New York City</i>
Charles Vincent Burke.....	<i>New Jersey</i>
Edmund Burke.....	<i>New York City</i>
Francis St. John Burke.....	<i>New York City</i>
Edward Michael Burns, B.S.....	<i>New York</i>
Edward Ward Burns.....	<i>Pennsylvania</i>

NAME.	RESIDENCE.
Martin Francis Burns, A.B.	<i>Massachusetts</i>
Reed Burns, M.D.	<i>Pennsylvania</i>
Joseph Byrne, A.B.	<i>Nebraska</i>
John Andrew Calnane.	<i>Maine</i>
Fred Charles Cameron.	<i>New York</i>
Ransford De Los Canedy.	<i>Massachusetts</i>
Herbert Swift Carter, A.B.	<i>New Jersey</i>
Fred. Bellinger Casey, M.D.	<i>New York</i>
Amasa Day Chaffee, A.B.	<i>Connecticut</i>
Edwin Crosby Chamberlin.	<i>New York</i>
Theodore Chamberlin, A.B.	<i>Massachusetts</i>
George Fletcher Chandler.	<i>New York</i>
Robert Fendall Chapman, B.S.	<i>New York City</i>
William Samuel Cherry.	<i>New York City</i>
Thomas Weston Chester, A.B.	<i>New Jersey</i>
Frank Malcolm Child.	<i>New Jersey</i>
Albert King Chipp.	<i>New York City</i>
John Rogers Clark, A.M.	<i>Maine</i>
Omar Joseph Clark.	<i>New York City</i>
Raymond Clark.	<i>Brooklyn, N. Y.</i>
Marcus Lerane Clawson.	<i>New Jersey</i>
John Elwyn Cochrane.	<i>New York</i>
Harry Dingee Coe.	<i>New York City</i>
Augustus Cohen.	<i>New York City</i>
Wallace Warren Colby.	<i>Brooklyn, N. Y.</i>
Howard Dennis Collins, A.B.	<i>New York City</i>
Howard Ogle Comegys.	<i>New York City</i>
Seth Cook Comstock.	<i>Connecticut</i>
John Timothy Connelly.	<i>New Jersey</i>
Charles Frank Connor.	<i>Massachusetts</i>
Lee Cooke.	<i>New York City</i>
Irving Jabez Cook.	<i>New Jersey</i>
Daniel Ferry Costello.	<i>New York City</i>
Isaac Laurence Coutant.	<i>New York</i>
Samuel James Craig.	<i>Brooklyn, N. Y.</i>
John Joseph Cronin, A.B.	<i>Massachusetts</i>
Frank Elihu Crosier, A.B.	<i>Massachusetts</i>
David Ryerson Crounse.	<i>New Jersey</i>
Willis Hanford Crowe.	<i>Connecticut</i>
Rev. Walter Thomas Currie, A.B.	<i>Canada</i>
Edwin Rue Curry, A.B.	<i>Kentucky</i>
Henry Mortimer Cunningham.	<i>Canada</i>
Thomas Maltby Cunningham.	<i>Canada</i>
Nicholas Robert Dann, A.B.	<i>New York City</i>
Henderson Brooke Deady.	<i>Oregon</i>

NAME.	RESIDENCE.
George Van Ness Dearborn, B.L.	<i>New Hampshire</i>
Charles Abnon de Lima	<i>New York City</i>
Nelson Lloyd Deming, Ph.B.	<i>New York City</i>
Edward Francis Denner, A.M.	<i>New York City</i>
Frank Wellington Dennis, M.D.	<i>New York</i>
Robert Denniston, A.B.	<i>New York</i>
William Edward de Salazar	<i>New York City</i>
William Lowther Des Portes	<i>South Carolina</i>
William Knecht Detwiller	<i>Pennsylvania</i>
John Milton Dexter, Jr.	<i>New York</i>
José Anastasis Diaz-Rodriguez, A.B.	<i>Porto Rico</i>
Edward Evans Dickinson	<i>Bermuda</i>
Joseph Melton Dill	<i>Illinois</i>
Joseph Aloysius Dillon, B.S.	<i>New York City</i>
Richard Herman Dingelstedt	<i>New Jersey</i>
Joseph Smith Dodd	<i>New Jersey</i>
Walter Dodge, Ph.B.	<i>Connecticut</i>
Robert Metcalf Dodswoth, Ph.B.	<i>California</i>
Edmund Le Roy Dow, B.S.	<i>New York</i>
Mortimer Byron Downer	<i>New York</i>
William A. Downes	<i>Texas</i>
Moses Duckman	<i>New York City</i>
William Lawrence Dudley, B.S.	<i>New York City</i>
William Willcox Dunn	<i>Virginia</i>
James Walter Dunphy	<i>New York City</i>
John Franklin Dunseith	<i>New York City</i>
Jay Harvey Durkee, A.B.	<i>Florida</i>
Basil Hicks Dutcher, Ph.B.	<i>New York City</i>
George Thomas Dutcher	<i>New York</i>
Jonathan Dwight, Jr., A.B.	<i>New York City</i>
Samuel Joseph Dwyer	<i>Texas</i>
Horace Wardner Eggleston	<i>New York City</i>
James Nelson Elliot	<i>New York City</i>
Charles Albert Elsberg, A.B.	<i>New York City</i>
Leonard Wheeler Ely, A.B.	<i>New York City</i>
Philip Embury	<i>New Jersey</i>
Floyd Bonesteel Ennist	<i>New York</i>
Evan Morton Evans, B.S.	<i>New Jersey</i>
Samuel Morley Evans	<i>New York City</i>
Louis Julius Fehr	<i>New Jersey</i>
Carlisle Franklin Ferrin, A.B.	<i>Vermont</i>
Peter Conover Field, B.S.	<i>New Jersey</i>
Edward Bronson Finch, A.B.	<i>Massachusetts</i>
William Young Finch	<i>New York</i>

NAME.	RESIDENCE.
Parnold Ellis Fisher, A.B.....	<i>Rhode Island</i>
Albert Franklin Fitch, Jr., B.S.....	<i>Brooklyn, N. Y.</i>
Alston Fitts, A.B., LL.B.....	<i>Alabama</i>
Paul Fitz-Gerald, A.B.....	<i>New Jersey</i>
Cornelius Dennis Fitzpatrick, A.M.....	<i>Mexico</i>
Frederic Hoole Floy.....	<i>New Jersey</i>
Clyde Sinclair Ford, B.S.....	<i>West Virginia</i>
Ernest Wallace Fowler.....	<i>District of Columbia</i>
Russell Story Fowler.....	<i>Brooklyn, N. Y.</i>
Isaac Frankenstein	<i>New York City</i>
Melvin Marcus Franklin.....	<i>New York City</i>
Simon Gabriel Frank.....	<i>New York City</i>
Robert Samuel Freedman.....	<i>New York City</i>
Eugene Herbert Fried.....	<i>New York City</i>
Maurice Friedman.....	<i>New York City</i>
Samuel Friedman.....	<i>New York City</i>
Samuel Knapp Frost.....	<i>New York</i>
Richard Frothingham, M.D	<i>Massachusetts</i>
Joseph Edward Fuld.....	<i>New York City</i>
Herbert Edmond Gardinor.....	<i>New Jersey</i>
George Upfold Gates.....	<i>New York</i>
William Gauch, Jr.....	<i>New Jersey</i>
Ennis Ignatius Geraghty.....	<i>New York City</i>
Ernest Carson Gibney, A.B.....	<i>New York City</i>
Howard Lawrance Gill	<i>New York City</i>
Robert David Glasgow, M.D.....	<i>North Dakota</i>
Henry Robert Gledhill, A.B.....	<i>Illinois</i>
James Patrick Glynn, A.M.....	<i>Brooklyn, N. Y.</i>
Ernest Goldbacher	<i>New York City</i>
Ralph Henry Goldberg.....	<i>New York City</i>
David Goldberger.....	<i>New York City</i>
Harry Philip Goldfrank.....	<i>New York City</i>
Albert Goodman.....	<i>Oregon</i>
Charles Goodman, M.D.....	<i>Ohio</i>
Charles Howard Goodrich.....	<i>Connecticut</i>
Howard Jerome Goodrich.....	<i>New York</i>
Ralph Schuyler Goodwin, Jr., Ph.B.....	<i>Connecticut</i>
William Munson Goodwin.....	<i>Connecticut</i>
Ernst Hermann Carl Graeb.....	<i>New York City</i>
Charles Solomon Grant, M.D.....	<i>New York</i>
William James Greanelle, B.S.....	<i>New York City</i>
John Gerhard Wilhelm Greeff.....	<i>New York</i>
Mark Brown Grier, A.B.....	<i>New York City</i>
John De Lafayette Grissim.....	<i>California</i>
Henry Michael Groehl, Ph.G.....	<i>New York City</i>
Samuel Saunders Guerrant, M.D.....	<i>New York</i>

NAME.	RESIDENCE.
Frederick William Hagney, B.S.....	<i>New Jersey</i>
Dupree Meriweather Hall, A.B.....	<i>Tennessee</i>
James Hall.....	<i>New York City</i>
John Taylor Halsey.....	<i>New York City</i>
David Joseph Hamburg, B.S.....	<i>New York City</i>
Gordon Courteney Hamilton.....	<i>New Jersey</i>
Varney Bernard Hamlin.....	<i>New York</i>
George Tillinghast Hammond, Jr.....	<i>Brooklyn, N. Y.</i>
Edward William Hanlon.....	<i>California</i>
Harry Theodore Harding.....	<i>District of Columbia</i>
Isham Green Harris, M.D.....	<i>New York</i>
William Nelson Harrison.....	<i>New York City</i>
Hugh Macdougall Hart.....	<i>New Jersey</i>
Theodore Stuart Hart, A.B.....	<i>New York City</i>
Eugene Howe Hartnett, B.S.....	<i>New Jersey</i>
John Augustus Hartwell, Ph.B., M.D.....	<i>New Jersey</i>
James Foster Hasbrouck.....	<i>New York City</i>
John Gael Hathaway.....	<i>Massachusetts</i>
Clarence Merritt Haviland.....	<i>New Jersey</i>
Roy Harlan Hawkes.....	<i>New York City</i>
William Van Valsah Hayes, Ph.B.....	<i>Pennsylvania</i>
Edwin Pelton Hayward.....	<i>Nebraska</i>
Allen Hazen, A.B.....	<i>Massachusetts</i>
George Philip Heard, A.B.....	<i>Alabama</i>
George Stanley Heft.....	<i>New York City</i>
Joseph Heimovitz.....	<i>New York City</i>
Clarence Louis Heller.....	<i>California</i>
George Isaac Hemingway.....	<i>Connecticut</i>
Edmund Taylor Henry.....	<i>New Jersey</i>
Joseph Henschel, A.B.....	<i>New York City</i>
Frederick Marcus Henssler.....	<i>New York City</i>
Alexander Martin Heron.....	<i>New Jersey</i>
Charles Herrmann, B.S.....	<i>New York City</i>
Elias Pierre Peter Hicks.....	<i>New York</i>
William Avery Hillard.....	<i>Rhode Island</i>
John Augustus Hill, Jr.....	<i>Pennsylvania</i>
Philip Hanson Hiss, Jr.....	<i>Maryland</i>
Edward Sterling Hogdskin.....	<i>Brooklyn, N. Y.</i>
Abraham Frank Hoffecker.....	<i>New Jersey</i>
Gustave Paul Hoffmann, Ph.G.....	<i>New Jersey</i>
Henry Willing Holling.....	<i>New York City</i>
Charles Marvin Hollister, A.B.....	<i>New York</i>
Edwin Holmes, A.B.....	<i>New York</i>
James Fred Holmes, A.B., A.M.....	<i>New York City</i>
Joseph Scripture Holroyd.....	<i>New York City</i>
John Milton Holt.....	<i>Brooklyn, N. Y.</i>

MEDICAL CLASS

41

NAME.	RESIDENCE.
Frederick Whitcomb Hornick	<i>New Jersey</i>
Edward Franklin Horr, A.B.	<i>Connecticut</i>
John Cummings Houston	<i>New Jersey</i>
Charles James Howard	<i>New York</i>
Hampton Pierson Howell	<i>New York</i>
Carl Adolph Huber	<i>New York</i>
John Jacob Hubschmitt, Ph.G.	<i>New York City</i>
Max Hühner	<i>New York City</i>
Harry Richard Humphries, Jr.	<i>New York City</i>
Lee Maidment Hurd	<i>New York</i>
Harry Hutchinson, A.B.	<i>New Hampshire</i>
James Hutchison, A.M., M.D.	<i>New York City</i>
David Jacob Hyman	<i>Brooklyn, N. Y.</i>
Eugene Robert Hynard, Ph.G.	<i>New York City</i>
Clarence Edward Ide	<i>Rhode Island</i>
Asa Stewart Iglehart, A.B.	<i>New York City</i>
Robert Franklin Ives	<i>Brooklyn, N. Y.</i>
Theodore Israel Jacobus, B.S.	<i>New York City</i>
James Ralph Jacoby, A.B.	<i>New York City</i>
Charles Herman Jaeger	<i>New York City</i>
Frederick William James	<i>New York</i>
Theodore Caldwell Janeway, Ph.B.	<i>New York City</i>
Schuyler Clinton Jaques	<i>Indiana</i>
Seymour Tilford Jarecki	<i>Colorado</i>
David Stuart Dodge Jessup, A.B.	<i>Syria</i>
Charles H. Johnson, A.B.	<i>Kansas</i>
Philip Edwards Johnson, A.B.	<i>New York</i>
William Cameron Johnstone	<i>New York City</i>
Charles Samuel Josephs	<i>New York City</i>
Joseph Chaim Josephson, A.B.	<i>New York City</i>
Charles Pitt Fid Joyce, A. B.	<i>Vermont</i>
Edgar Collins Joyce	<i>New York City</i>
Albert Martin Judd	<i>New York City</i>
Julius Jungmann	<i>New York</i>
John Decator Justice, M.D.	<i>Kansas</i>
Paul Kahn	<i>New York City</i>
Wulff Kahn	<i>New York City</i>
Henry Chrysostom Keenan, A.B.	<i>Brooklyn, N. Y.</i>
Josiah Herbert Keenan	<i>New Jersey</i>
Frederick Conrad Keller	<i>New York City</i>
Edward Leland Kellogg	<i>New York City</i>
Thomas Alexander Kenyon	<i>New York City</i>
Edward Cumberland Kershner, A.B.	<i>New York City</i>

NAME.	RESIDENCE.
Edward Loughborough Keyes, A.B.....	<i>New York City</i>
Edward Stephen Kiley, A.B.....	<i>Rhode Island</i>
Theron Wendell Kilmer.....	<i>New York City</i>
Sumner Butler Kingsley.....	<i>New York</i>
Bayard Treadwell Kissam.....	<i>New Jersey</i>
Edwin Mathews Kitchel.....	<i>New York City</i>
Ferdinand Austin Kittinger.....	<i>New York</i>
William Thomas Charles Klein.....	<i>New York City</i>
Louis Theodore Klinker.....	<i>New York City</i>
Ephraim Daniels Klotz.....	<i>Minnesota</i>
Charles Platt Knowles.....	<i>New York</i>
Josiah George Knowlton.....	<i>Missouri</i>
Albert Edwin Koonz.....	<i>New Jersey</i>
Francis Anthony Kopecky.....	<i>New York City</i>
Conrad Piser Kornreich.....	<i>New York City</i>
John Benem Kouwenhoven, A.B.....	<i>New York</i>
Geza Kremer.....	<i>Austria</i>
Carl Henry Kroeber.....	<i>New York</i>
Joseph Allen Kyle, B.S.Ag.....	<i>Texas</i>
Linnæus Edford La Fetra, A.B.....	<i>District of Columbia</i>
William Watson Laing.....	<i>Brooklyn, N. Y.</i>
James Rudolph Laird.....	<i>New Jersey</i>
George Francis Lamont.....	<i>Brooklyn, N. Y.</i>
George Ludwig Laporte, Jr.....	<i>New Jersey</i>
John Henry Larkin, A.B.....	<i>New York City</i>
James Ralston Lattimore.....	<i>Georgia</i>
George Alfred Lawrence, A.B.....	<i>Texas</i>
John Lawrence.....	<i>New York City</i>
William Tilson Lawson.....	<i>New York City</i>
A. Lincoln Leatherman.....	<i>Ohio</i>
Thomas Sim Lee, A.B.....	<i>New York City</i>
Arnold Gustave Leo.....	<i>New York City</i>
Louis Lesinsky.....	<i>New York City</i>
Frederick William Lester.....	<i>New York</i>
Morris Levy, A.B.....	<i>New York City</i>
Leon Theodore Lewald.....	<i>Iowa</i>
John Cadwallader Lewis.....	<i>Kentucky</i>
Reginald Joseph Moss Lewis.....	<i>Jamaica, W. I.</i>
Emmanuel Libman, A.B.....	<i>New York City</i>
George French Little, A.B.....	<i>Brooklyn, N. Y.</i>
Alfredo Lizano-Ulloa, A.B.....	<i>Costa Rica, C. A.</i>
Murray Loewenthal.....	<i>New York City</i>
William Popper Loth.....	<i>Missouri</i>
Henry Christian Lovis, Ph.G.....	<i>New York City</i>
Grosvenor Porter Lowrey, Jr.....	<i>New York City</i>

NAME.	RESIDENCE.
George Davis Lowry, A.B.....	<i>Ohio</i>
William Henry Luckett.....	<i>Texas</i>
Robert Barkley Ludington, B.S.....	<i>New York City</i>
Stephen Henry Lutz.....	<i>Brooklyn, N. Y.</i>
Cecil Laurence MacCoy.....	<i>New Jersey</i>
Robert Langdon Macdermott.....	<i>New Jersey</i>
Arthur Lee Macken.....	<i>New York</i>
Montefiore Levy Maduro.....	<i>New York City</i>
Frank Hosmer Magness.....	<i>New York City</i>
Bartholomew Edward Mahaney.....	<i>Massachusetts</i>
John Preston Mann, M.D.....	<i>New York City</i>
Jeremiah Neil Martin, A.B.....	<i>New York City</i>
Herbert Boyd Masten.....	<i>New York</i>
John Miller Masury.....	<i>New York City</i>
Francis Stuart Mathews, B.S.....	<i>Pennsylvania</i>
Henry Smith Mathewson, A.B.....	<i>Connecticut</i>
Albert David Mayer.....	<i>Texas</i>
Samuel Erskine Maynard, M.D.....	<i>Vermont</i>
Henry Graham McAdam.....	<i>New York City</i>
George Eldredge McClellan, Ph.B.....	<i>Connecticut</i>
Robert Hall McConnell.....	<i>New York City</i>
William Thomas McConvill.....	<i>New Jersey</i>
John Butler McCook, B.S.....	<i>Connecticut</i>
Daniel Leo McCormick.....	<i>New Jersey</i>
John Joseph McCoy.....	<i>New York City</i>
Jonathan Titus McDonald, A.B., M.D.....	<i>California</i>
Arthur Francis McGinn, A.B.....	<i>Rhode Island</i>
Augustine Charles McGuire.....	<i>New York City</i>
George Foley McGuire.....	<i>Connecticut</i>
Laurence Michael Dennis McGuire.....	<i>New York City</i>
Frank Harold McLaury.....	<i>New York City</i>
Joseph Mac McMillan.....	<i>New York</i>
Thomas Curtis McSwain, M.D.....	<i>South Carolina</i>
William Henry McWilliam.....	<i>New York City</i>
Clarence Arthur McWilliams, A.B.....	<i>Brooklyn, N. Y.</i>
Frank Sherman Meara, A.B., Ph.D.....	<i>Massachusetts</i>
Edward Norris Kirk Mears, A.B.....	<i>Massachusetts</i>
Victor John Meltzer.....	<i>New York City</i>
Frank Denton Merritt.....	<i>New York City</i>
Alfred Edward Meyer.....	<i>New York City</i>
John Izard Middleton, A.B.....	<i>New York City</i>
Emery Austin Miller.....	<i>New York City</i>
Thomas Miller, M.D.....	<i>Wisconsin</i>
Henry Mateland Mills, Ph.G.....	<i>Brooklyn, N. Y.</i>
Philip William Moeller.....	<i>New York</i>

NAME.	RESIDENCE.
Augustine Joseph Molloy.....	<i>Brooklyn, N. Y.</i>
David Falkner Monash.....	<i>New York City</i>
George Swan Mooney.....	<i>New York</i>
George Mord.....	<i>New York</i>
Francis Patterson Morgan, A.B.....	<i>District of Columbia</i>
Harold James Morgan.....	<i>New York</i>
Edward Moriarty.....	<i>Connecticut</i>
Alpheus Baker Morrill, B.S.....	<i>New Hampshire</i>
Paul Morrison, A.B.....	<i>Ohio</i>
Elwood Stokes Morton.....	<i>New Jersey</i>
Wesley Thomas Mulligan, Ph.B.....	<i>New York</i>
Adolf Mund.....	<i>New York City</i>
Deas Murphy, A.B.....	<i>New York City</i>
Joseph Paul Murphy, B.S.....	<i>Massachusetts</i>
Francis James Murray.....	<i>New York City</i>
John Donaldson Murray.....	<i>New York City</i>
William Brown Murray, M.D.....	<i>Minnesota</i>
Thomas Francis Mylod.....	<i>New York</i>
Selian Neuhoof, B.S.....	<i>New York City</i>
Alfred Nelson New.....	<i>New York</i>
Elwin Milton Nichols.....	<i>Vermont</i>
Lorenzo Miller Nicholson.....	<i>Brooklyn, N. Y.</i>
Harry Dorr Niles, M.D.....	<i>Utah</i>
Carl Jonas Nordström.....	<i>Sweden</i>
Nathaniel Read Norton, Ph.B.....	<i>Brooklyn, N. Y.</i>
Robert Denniston Oakley.....	<i>New York</i>
Frank Richard Oastler, A.B.....	<i>New York City</i>
John Hilbert Oberle.....	<i>New York City</i>
Joseph O'Brien.....	<i>New York City</i>
Michael Christopher O'Brien, M.D.....	<i>New York City</i>
George Patrick O'Donnell, A.B.....	<i>Massachusetts</i>
James Coughlin O'Donnell, A.B.....	<i>Massachusetts</i>
Michael William O'Gorman, A.B.....	<i>New Jersey</i>
Charles Henry Francis O'Neill, A.B.....	<i>New Brunswick, Canada</i>
Albert Oppenheim.....	<i>New York City</i>
Michael Francis O'Shea.....	<i>Pennsylvania</i>
Peter O'Shea, A.B.....	<i>Massachusetts</i>
John Joseph O'Sullivan, A.B.....	<i>New York City</i>
Ralph Chester Otis.....	<i>Illinois</i>
Frank Overton, A.B.....	<i>New York</i>
Henry Farrar Owsley.....	<i>Ohio</i>
Frank Elmer Pagett.....	<i>New York</i>
Carlos Manuel Palma.....	<i>New York City</i>

NAME.	RESIDENCE.
Gist Palmer, B.S.....	<i>West Virginia</i>
Samuel Barfield Palmer, A.B.....	<i>Georgia</i>
Edward Oliver Parker, A.B.....	<i>New York City</i>
Ransom Joseph Parker.....	<i>New York City</i>
Jacob Hagop Parseghian, A.B.....	<i>New York City</i>
Horace Wilbur Patterson.....	<i>New York</i>
George Stark Pearce.....	<i>New York</i>
Louis Ernst Charles Peilert.....	<i>New York City</i>
Charles Ernest Pellew, E.M.....	<i>New York City</i>
Henry Russell Pemberton, A.M., B.S.....	<i>Virginia</i>
Charles Perpente.....	<i>Brooklyn, N. Y.</i>
Guy Sherman Peterkin.....	<i>New York</i>
James Edward Pettus.....	<i>Brooklyn, N. Y.</i>
Charles Dickinson Phelps, A.B.....	<i>Connecticut</i>
James Jones Phillips, A.B.....	<i>North Carolina</i>
Paul Chrysostom Phillips, A.B.....	<i>Massachusetts</i>
Samuel Grey Courtney Pinckney.....	<i>New York City</i>
Albert Pittis.....	<i>New Jersey</i>
Anthony Jarvis Joseph Pixley.....	<i>Connecticut</i>
Morris Pollack.....	<i>New York City</i>
Joseph Egbert Pollard.....	<i>New Jersey</i>
Daniel Warren Poor, Jr., A.B.....	<i>New Jersey</i>
William James Porter, M.D.....	<i>New York City</i>
Joseph William Posthauer.....	<i>New York City</i>
Walter Bonamy Power.....	<i>New Jersey</i>
Otto Emil Prellwitz, A.B.....	<i>New York City</i>
Paul Peter Prendergast.....	<i>Brooklyn, N. Y.</i>
Henry James Prentiss, M.E.....	<i>New York City</i>
Frank Julian Price, A.B.....	<i>Brooklyn, N. Y.</i>
Louis Frederick Psotta.....	<i>New York City</i>
Myles Purvin.....	<i>Brooklyn, N. Y.</i>
Charles Clary Rathbone.....	<i>New York City</i>
Frank Andrew Ratigan, A.B.....	<i>Massachusetts</i>
George Rauchfuss.....	<i>New York City</i>
Addison Raynor.....	<i>New York</i>
John Henry Reb.....	<i>Brooklyn, N. Y.</i>
Joseph Manuel Rector, A.B.....	<i>New Jersey</i>
Arthur Lynnewood Reeve.....	<i>Brooklyn, N. Y.</i>
Strother William Rice, A.B.....	<i>New Jersey</i>
Jacob Monroe Rich, E.M., C.E.....	<i>New York City</i>
Michael Placzek Rich.....	<i>New York City</i>
John Selden Richardson, A.M.....	<i>Virginia</i>
Emil Gustave Ring.....	<i>New York City</i>
Alfred Bradford Ripley, A.B.....	<i>New York City</i>
George Johnson Rittenhouse.....	<i>New York City</i>

NAME.	RESIDENCE.
Francisco Rivera.....	<i>Columbia, S. A.</i>
Jonathan Manning Roberts.....	<i>New Jersey</i>
Frank Wade Robertson.....	<i>New York</i>
Fielding Tecumseh Robeson.....	<i>New York City</i>
Charles Thomas Robinson, A.B.....	<i>New York City</i>
Harry Rodman, A.B.....	<i>New York City</i>
Mariano Rodriguez.....	<i>Costa Rica</i>
William Homan Roe.....	<i>New York</i>
Edward Nicholas Roeser, B.S.....	<i>New York City</i>
Robert Hastings Rogers.....	<i>New Jersey</i>
Leoncio Ros.....	<i>Cuba</i>
Edwin Leopold Rose.....	<i>New York City</i>
Bernard Samuel Roseneau, A.B.....	<i>New York City</i>
Louis Rosenwasser.....	<i>New York City</i>
Solomon Rottenberg, Ph.G.....	<i>New York City</i>
Frederick Fuller Russell.....	<i>Brooklyn, N. Y.</i>
Thomas Eugene Ryan.....	<i>New York City</i>
Ferdinand William Sackett, A.B.....	<i>New York City</i>
Trafford Brasee Salisbury.....	<i>New York City</i>
Lloyd Saltus.....	<i>Brooklyn, N. Y.</i>
Arthur William Sander.....	<i>New York City</i>
Benjamin Jerome Sands, A.B.....	<i>New York</i>
Eugene Boutelle Sanger, Ph.B.....	<i>Maine</i>
John Wellington Sansom.....	<i>New Jersey</i>
Henry Philip Scharringhausen.....	<i>New York City</i>
Henry William Schlesinger, A.B.....	<i>New York City</i>
Emil Schmitt.....	<i>New York City</i>
Edward Schnaper.....	<i>New York City</i>
William Charles Schoenijahn.....	<i>Brooklyn, N. Y.</i>
Warren Schoonover, Jr.....	<i>New York City</i>
Otto Adolph Schreiber, A.B.....	<i>New Jersey</i>
Alfred Schwab.....	<i>New York City</i>
Elmer Albert Scott.....	<i>New York City</i>
Heyward Scudder, A.B.....	<i>New York City</i>
Charles James Search, A.B., M.D.....	<i>New York City</i>
Frank Walker Sears.....	<i>New York</i>
Edgar Calvin Seibert.....	<i>New Jersey</i>
James Bernard Shannon, A.B.....	<i>Connecticut</i>
Thomas Bond Shaw, A.B.....	<i>New York City</i>
Forrest Shepherd, A.B.....	<i>Connecticut</i>
William John Shields, Jr.....	<i>New York City</i>
John Lawrence Shiels.....	<i>New York City</i>
Arthur Melville Shradly, A.B.....	<i>New York City</i>
Percy John Shute.....	<i>New York City</i>
Ernst Frederick Sickenberger, Ph.G.....	<i>New York City</i>

NAME.	RESIDENCE.
Malcolm Toland Sime.....	California
Ludwig S. Simon, Ph.B.....	Iowa
James Gordon Hamilton Simpson.....	New York City
Willet Runyon Skillman.....	New York City
Alfred Keene Smith, Ph.G.....	New York
Louis Percy Smith.....	District of Columbia
Thomas Allison Smith.....	New York
Rev. William Walter Smith, A.B., A.M.....	New York City
Wright Smith.....	New York City
Langdon Trufant Snipe, A.B.....	Maine
Percy Clinton Snowden.....	New York
Jacob Sobel, A.B.....	New York City
Lazarus Sylvester Sobel.....	New York City
Paul Frederick Sondern.....	Brooklyn, N. Y.
Bernard Sour.....	Louisiana
Frederick Hessler Sparrenberger.....	Brooklyn, N. Y.
Thomas Bray Spence, A.B.....	New Jersey
William Philip Spratling, M.D.....	New York City
John Bentley Squier, Jr.....	New York City
Louis John Frederick Staack.....	New York City
Harry Grant Stafford.....	New York City
Guy Beckly Stearns.....	New Hampshire
Charles Daniel Steenken, A.B.....	Maryland
William Steinach, A.B.....	New York City
Solomon Steiner.....	Bohemia
William Barclay Stephens, A.M.....	Kentucky
Plowdon Stevens, Jr., B.S.....	New York City
Fornby Caldwell Stevenson.....	Alabama
George David Stevenson.....	New Jersey
Moses Ashby Stivers.....	New York
Casper Stock, B.S.....	New York City
George Stoddard Stout.....	New Jersey
James Stephen Stout.....	New Jersey
Frank Crombie Studley, B.S.....	Wisconsin
John Francis Sullivan, A.B.....	Connecticut
Albert Earl Sumner, A.B.....	New York
Dennis Joseph Sweeney.....	Brooklyn, N. Y.
Denis Patrick Sweeney.....	New York City
Martin John Synnott.....	New Jersey
Paul Gerald Taddiken.....	New York City
Robert Wood Tate.....	Tennessee
Alfred Simpson Taylor, A.M.....	Rhode Island
Stephen Livingston Taylor, A.B.....	New York
Robert James Terry.....	Missouri
Frank Webster Terwilliger.....	New York City

NAME.	RESIDENCE.
William Gilbert Terwilliger.....	<i>New York</i>
William Henry Theban, A.B.....	<i>New York City</i>
Carl Theobald, B.S.....	<i>New York City</i>
William Ephroditus Thomas.....	<i>Florida</i>
Lloyd Orrin Thompson, M.D.....	<i>Brooklyn, N. Y.</i>
Charles Edward Thomson, M.D.....	<i>Canada</i>
Josiah Payne Thornley, M.D.....	<i>Virginia</i>
George Charles Emil Thum, Ph.G.....	<i>New York City</i>
Samuel Wood Thurber, B.S.....	<i>France</i>
Joseph Reynolds Tillinghast, Jr.....	<i>New Jersey</i>
Leo Tobias, B.S.....	<i>New York City</i>
Benjamin Torrens.....	<i>New York City</i>
Paul Haddock Tracy.....	<i>New York City</i>
Walter Day Trenwith.....	<i>California</i>
Charles Henry Trowbridge.....	<i>Wisconsin</i>
Molyneaux Lawrence Turner.....	<i>New York City</i>
Winne Tygert.....	<i>New Jersey</i>
James Samuel Unger.....	<i>New York City</i>
Harvey Clinton Upchurch, A.B.....	<i>North Carolina</i>
Charles Auguste Valadier, A.B.....	<i>New York City</i>
Gilbert Julius Van der Smisen.....	<i>New York City</i>
Joseph Vandeventer, M.D.....	<i>Michigan</i>
Arthur Ward Van Riper, A.B.....	<i>New Jersey</i>
Jefferson Brockner Van Tine.....	<i>New York City</i>
Frederick Van Vliet.....	<i>New Jersey</i>
Cornelius Doremus Van Wagenen, A.B., A.M.....	<i>New York City</i>
William Remsen Varick.....	<i>New York</i>
Auguste Schwarzwaelder Vatable, A.B.....	<i>New York City</i>
Henry Palmerston Vaughan.....	<i>Canada</i>
Paul Burtis Vedder.....	<i>New York City</i>
Harwood Vernon, A.B.....	<i>New York City</i>
James Ditmars Voorhees, A.B.....	<i>New Jersey</i>
Maximilian Joseph Voos.....	<i>New York City</i>
Arthur Seymour Vosburgh, A.B.....	<i>New York City</i>
Herman Gustave Wahlig.....	<i>New York City</i>
Charles Howard Walker, A.B.....	<i>New York City</i>
Delavan Edward Walker, A.M., M.D.....	<i>New York</i>
Starr King Walker.....	<i>New York City</i>
Fred Cole Wallin.....	<i>New York</i>
Louis Walther.....	<i>New York City</i>
Freeman Ford Ward.....	<i>New York City</i>
Isaac Charles Warsaw, Ph.G.....	<i>New York City</i>
Bertram Howard Waters, A.B., A.M.....	<i>New York City</i>
John Sherreaf Waters, A.B.....	<i>Brooklyn, N. Y.</i>
James Thomas Watkins, Jr.....	<i>New York City</i>

NAME.	RESIDENCE.
Robert Watts, Jr., A.B.....	<i>New York City</i>
Walter Duval Webb.....	<i>New York City</i>
William Edmund Weber, A.B.....	<i>New Jersey</i>
Henry Goodwin Webster, A.B.....	<i>Brooklyn, N. Y.</i>
Stuart Webster, A.B.....	<i>Illinois</i>
Robert Wedekind.....	<i>Kentucky</i>
George Oakley Welshman.....	<i>New Jersey</i>
Calvin B. West.....	<i>New York</i>
Caleb Frazer West.....	<i>Kentucky</i>
William Edward West.....	<i>New York</i>
Arthur Charles Wheeler.....	<i>Pennsylvania</i>
Horace J. Whitacre, B.S.....	<i>Ohio</i>
Harry Draper White.....	<i>New York</i>
Wallace White.....	<i>New Jersey</i>
Rufus Baldwin Whitehead.....	<i>New Jersey</i>
Frederick Newton Whitehorse, A.B.....	<i>New York City</i>
Joseph Wiener, A.B.....	<i>New York City</i>
William Elrich Wild.....	<i>New York City</i>
George Frank Wilklow.....	<i>New York</i>
Howard Crosby Williams.....	<i>New York City</i>
William Edwin Williams.....	<i>Tennessee</i>
William Robert Williams, A.M.....	<i>Minnesota</i>
Harry Hall Wilson.....	<i>New York</i>
William Robert Anthony Wilson, A.B.....	<i>Illinois</i>
Isaac Wilzin.....	<i>Brooklyn, N. Y.</i>
Henry Wintsch.....	<i>New Jersey</i>
Augustus Aloysius Wolff.....	<i>New York City</i>
Ferdinand Charles Wolff.....	<i>New Jersey</i>
Julius Wolff, A.B.....	<i>New York City</i>
Francis Carter Wood, B.S.....	<i>Ohio</i>
William Thomas Woodley, M.D.....	<i>North Carolina</i>
Henry Rufus Lankford Worrall.....	<i>New Jersey</i>
Arthur Brownell Wright, A.B.....	<i>Minnesota</i>
George Hermann Wright, A.B.....	<i>New York City</i>
William Wright.....	<i>New York</i>
Sidney Yankauer, A.B.....	<i>New York City</i>
Andrew Benedict Yard.....	<i>New York City</i>
Vincent Jay Youmans, Ph.B.....	<i>New York</i>
Charles Bellamy Young.....	<i>Brooklyn, N. Y.</i>
Harry Augustus Young.....	<i>Utah</i>
William Bellamy Young.....	<i>Brooklyn, N. Y.</i>
John Louis Zabala, B.S.....	<i>California</i>
Fred Templeton Zabriskie.....	<i>New York City</i>
Charles Cowing Zachrie.....	<i>New York</i>
Charles Henry Bernard Zeiser.....	<i>New York</i>
Total.....	661

For graduates of 1893 see catalogue for
1894-5.



Columbia College
in the City of New York

COURSE

IN THE

COLLEGE OF PHYSICIANS AND
SURGEONS

LEADING TO THE DEGREE

OF

DOCTOR OF MEDICINE

ANNOUNCEMENT

FOR

1894-1895

NOTE

In addition to the courses detailed in this pamphlet, Columbia College offers the following :

In the School of Arts	a 4-years' course	leading to the degree of	A.B.
" " " "Law	" 3-years' "	" " " " "	LL.B.
" " " "Mines"	" 4-years' "	in Mining Engineering leading to the degree of	M.E.
" " " " " " " " "	" " " " " " " " "	Civil Engineering leading to the degree of	C.E.
" " " " " " " " "	" " " " " " " " "	Electrical Engineering leading to the degree of	E.E.
" " " " " " " " "	" " " " " " " " "	Metallurgy leading to the degree of	Met.E.
" " " " " " " " "	" " " " " " " " "	Geology leading to the degree of	B.S.
" " " " " " " " "	" " " " " " " " "	Chemistry	B.S.
" " " " " " " " "	" " " " " " " " "	Architecture	B.S.

Also many courses in the various University Faculties, especially in the Faculties of Political Science, Philosophy, and Pure Science, leading to the university degrees of A.M. and Ph.D. A combination of courses under the Faculties of Law and Political Science leads to the degree of LL.M.

The first-year courses of the School of Law, the School of Mines, and the College of Physicians and Surgeons are open as electives to Seniors in the School of Arts. Consequently, such Seniors as may desire to do so can prepare themselves for advanced standing in those schools by electing these first-year courses and counting them for the degree of A.B.

Information as to any of the above courses may be had by addressing the Secretary of the President, Columbia College.

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UNIVERSITY FACULTY OF MEDICINE

SETH LOW, LL.D., *President*

NAMES	ADDRESSES
JAMES W. McLANE, M.D.....	51 West 38th Street Dean of the Faculty, <i>ex-officio</i> Delegate to the University Council Professor of Obstetrics
THOMAS M. MARKOE, M.D.....	20 West 30th Street Emeritus Professor of Surgery
WILLIAM DETMOLD, M.D.....	38 East 9th Street Emeritus Professor of Clinical and Military Surgery
T. GAILLARD THOMAS, M.D.....	600 Madison Avenue Emeritus Professor of Obstetrics and Gynecology
JOHN T. METCALFE, M.D.....	149 West 57th Street Emeritus Professor of Clinical Medicine
CHARLES F. CHANDLER, Ph.D.....	51 East 54th Street Professor of Chemistry and Medical Jurisprudence
EDWARD CURTIS, M.D.....	120 Broadway Emeritus Professor of Materia Medica and Therapeutics
FRANCIS DELAFIELD, M.D., LL.D.....	12 West 32d Street Professor of the Practice of Medicine
JOHN G. CURTIS, M.D.....	327 West 58th Street Professor of Physiology
GEORGE M. TUTTLE, M.D.....	49 West 38th Street Professor of Gynecology Secretary of the Faculty
GEORGE L. PEABODY, M.D.....	57 West 38th Street Professor of Materia Medica and Therapeutics, Delegate to the University Council
WILLIAM T. BULL, M.D.....	35 West 35th Street Professor of Surgery
M. ALLEN STARR, M.D., Ph.D.....	22 West 48th Street Professor of Diseases of the Mind and Nervous System

NAMES	ADDRESSES
GEORGE S. HUNTINGTON, M.D.....	50 East 73d Street
Professor of Anatomy	
R. F. WEIR, M.D.....	37 West 33d Street
Professor of Surgery	
T. MITCHELL PRUDDEN, M.D.....	160 West 59th Street
Professor of Pathology	
Director of the Laboratories of Histology, Pathology, and Bacteriology	

OTHER OFFICERS

WILLIAM H. DRAPER, M.D.....	19 East 47th Street
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Clinical Professor of the Diseases of Children	
FESSENDEN N. OTIS, M.D.....	5 West 50th Street
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GEORGE M. LEFFERTS, M.D.....	6 West 33d Street
Clinical Professor of Laryngoscopy and Diseases of the Throat	
GEORGE H. FOX, M.D.....	18 East 31st Street
Clinical Professor of Diseases of the Skin	
CHARLES MCBURNEY, M.D.....	28 West 37th Street
Professor of Clinical Surgery	
ALBERT H. BUCK, M.D.....	19 East 38th Street
Clinical Professor of the Diseases of the Ear	
HERMAN KNAPP, M.D.....	26 West 40th Street
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ROBERT W. TAYLOR, M.D.....	40 West 21st Street
Clinical Professor of Venereal Diseases	
FRANCIS P. KINNICUTT, M.D.....	42 West 37th Street
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FRANK HARTLEY, M.D.....	7 West 31st Street
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ANDREW J. MCCOSH, M.D.....	22 East 56th Street
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GEORGE C. FREEBORN, M.D.....	200 West 56th Street Instructor in Normal Histology
TIMOTHY M. CHEESMAN, M.D.....	46 East 29th Street Instructor in Bacteriology
ERVIN A. TUCKER, M.D..	Sloane Maternity Hospital, 59th St. and 10th Ave. Instructor in Practical Obstetrics
CHARLES E. PELLEW, E.M.....	68 East 54th Street Demonstrator of Chemistry and Physics
FREDERIC S. LEE, Ph.D.....	437 West 59th Street Demonstrator of Physiology
IRA VAN GIESON, M.D.....	437 West 59th Street First Assistant in Normal Histology
HENRY POWER, M.D.....	251 West 83d Street Assistant in Normal Histology
JAMES EWING, M.D.....	437 West 59th Street Assistant in Normal Histology
EDWARD M. KITCHEL, M.D.....	370 Washington Avenue, Newark, N. J. Assistant in Normal Histology
EUGENE HODENPYL, M.D.....	127 West 58th Street Assistant in Pathology
JOHN S. ELY, M.D... ..	107 West 74th Street Assistant in Pathology, and Curator of the Museum of Pathology
PEARCE BAILEY, M.D.....	50 East 31st Street Assistant in Pathology
EDWARD LEAMING, M.D.....	437 West 59th Street Assistant in Photography
ELLSWORTH ELIOT, Jr., M.D.....	48 West 36th Street Assistant Demonstrator of Anatomy
LUCIUS W. HOTCHKISS, M.D	30 East 35th Street Assistant Demonstrator of Anatomy
GEORGE E. BREWER, M.D.....	48 East 31st Street Assistant Demonstrator of Anatomy
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Assistant Instructor in Operative Surgery	

CLINICAL INSTRUCTORS AND CLINICAL ASSISTANTS AT THE VANDERBILT CLINIC

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JOSEPH AUGUSTUS BLAKE, M.D.	ROYAL WHITMAN, M.D., Clinical
PERCY RANNEY BOLTON, M.D.	Assistant in Orthopædic Surgery
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Department of Diseases of Children

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FRED S. MACHALE, M.D.	F. E. SONDERN, M.D.
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NAMES

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EDMOND Y. HILL, M.D.

WILLIAM C. GILLEY, M.D.

JOHN VAN DER POEL, M.D.

JOHN B. STEIN, M.D.

Officers of Administration

E. B. CRAGIN, M.D.

Assistant Secretary of the Faculty

EDWARD THOMAS BOAG

Registrar

GENERAL STATEMENT

The College of Physicians and Surgeons, on July 1, 1891, became, under the authority of the Legislature, a part of Columbia College. This merger, which makes the medical department in a complete sense an integral part of the university system, largely increases the usefulness of the medical school, favors the thoroughness of scientific medical education, and promotes scientific research. The accessions to the teaching force, notably in the department of anatomy and in the physiological, pathological, and chemical laboratories, permit the realization, to a degree previously quite impossible, of the great opportunities for instruction and research afforded by the excellence of the dissecting rooms, the laboratories, and apparatus.

The college occupies a group of buildings, given by the late William H. Vanderbilt and members of his family, and by William D. Sloane, Esq., which stand upon thirty contiguous lots of land, bounded on the south, west, and north by Fifty-ninth Street, Tenth Avenue, and Sixtieth Street, respectively, and lying immediately opposite to the Roosevelt Hospital.

The station, which is a few steps from the college, at the corner of Fifty-ninth Street and Ninth Avenue, is the point of union of the Ninth Avenue and Sixth Avenue Elevated Railroads, by either of which the buildings are immediately accessible from the north and south.

The "across-town" surface-cars of the Belt-line Surface Railway move east and west along Fifty-ninth Street, pass the site of the college, and place it in easy communication with the Second and Third Avenue Elevated roads, and with the numerous lines of surface-cars which reach Fifty-ninth Street from the north and south. All important points in the city, including the various hospitals, can thus readily be reached from the college without a walk of any length.

The buildings appertaining to the college are three in number:

THE COLLEGE BUILDING PROPER ;
THE VANDERBILT CLINIC ;
THE SLOANE MATERNITY HOSPITAL.

THE COLLEGE BUILDING PROPER has been designed to facilitate that combination of didactic instruction with laboratory work which is essential to a modern scientific training. It consists of a *southern portion*, measuring 140 feet by 43 feet, extending along Fifty-ninth Street ; of a *northern portion*, 96

feet by 43 feet, extending along Sixtieth Street ; and of a *middle portion*, 96 feet by 55 feet, connecting the other two. The total area covered is therefore 15,428 square feet. Each story above the basement of the northern and southern portions has been built "in the clear," and contains neither brick partitions nor iron columns. It is therefore possible to remodel the interior at any future time.

Vanderbilt Clinic

THE VANDERBILT CLINIC is upon the land given to the college at the corner of Sixtieth Street and Tenth Avenue, and is connected with the college building proper by a covered way.

This institution, which has been built and endowed by the sons of the late William H. Vanderbilt as a memorial of their father, supplies a fully equipped dispensary service for the sick poor ; and for the college, whose professors have entire charge of its practice, a field for extended and practical clinical instruction and research in all branches.

Besides its *dispensary department*, the building contains numerous *small rooms* for the direct practical teaching of diagnosis and treatment to groups of learners ; a so-called "*scope-room*" where a number of students at once can be instructed in the use of the ophthalmoscope, the laryngoscope, and the like ; and a *theatre*, for clinical lectures, which accommodates an audience of nearly four hundred. During the year 1893, 129,444 patients were treated at this institution, of whom 39,569 were new patients.

Sloane Maternity Hospital

THE SLOANE MATERNITY HOSPITAL is upon the college land at the corner of Fifty-ninth Street and Tenth Avenue.

This is a lying-in hospital given by William D. Sloane, Esq., whose wife, a daughter of the late William H. Vanderbilt, has endowed the institution by making all of its beds free in perpetuity.

The obstetric service here is under the exclusive direction of the professor of midwifery at the college, the instructor in obstetrics being the resident physician.

For further details and for the practical instruction at this hospital, see "Obstetrics," page 21.

CURRICULUM

Beginning with the academic year 1894-95, the work required of the students at this college who are candidates for the degree of M.D. covers four years of study according to the curriculum set forth below in outline.

This curriculum will be worked up in detail year by year, as the course progresses, the right being reserved to make amendments as experience may prove necessary.

Programmes of the exercises, giving time and place, will be distributed among the matriculates at the beginning of each annual session.

The following scheme does not affect students who have already matriculated and attended a session prior to 1894-95. Such students will complete the curriculum in force when they became students of the college.

The following statement is drawn up from the point of view of the student, and shows what is expected of each matriculate taking the regular curriculum.

In all subjects which are not completed in a single year the instruction offered to a given student will be different each year.

The regular instruction for 1894-95 will begin on Monday, October 1, 1894, at 9.30 A.M. Commencement will be on Wednesday, June 12, 1895.

Every student intending to pursue the four-years' course must register his name in person within the first seven working days of each session.

For the calendar, 1894-95, see the last page.

FIRST YEAR

PHYSICS AND CHEMISTRY, INCLUDING MEDICAL CHEMISTRY. (See page 24.)

Lectures combined with demonstrations, 4 a week.

Conferences, 2 a week for one half the year.

* *Laboratory Work* in practical physics, 2-hour exercise once a week for one half the year.

Laboratory Work in practical medical chemistry, 2-hour exercises twice a week for one half the year.

ANATOMY, begun. (See page 15.)

Demonstrations to sections, 4 a week for each student.

Laboratory Work in dissection, 18 to 20 hours a week, for from 3 to 5 periods of 4 weeks each.

NORMAL HISTOLOGY, begun. (See page 23.)

Laboratory Work, 2-hour exercises 3 times a week for one half the year.

PHYSIOLOGY, begun. (See page 27.)

Lectures combined with demonstrations, 3 a week.

Demonstrations to sections, from 1 to 3 a week for each student.

EXAMINATIONS upon the work of the first year.

SECOND YEAR

ANATOMY, finished.

Lectures combined with demonstrations, 3 a week.

Demonstrations to sections, 4 a week for each student for one half the year ; 5 a week for each student for one half the year.

Laboratory Work in dissection, 10 to 12 hours a week for from 1 to 3 periods of 4 weeks each.

NORMAL HISTOLOGY, finished.

Laboratory Work, 2-hour exercises twice a week for one half the year.

* At the Columbia College Physical Laboratory, 49th Street and Madison Avenue.

PHYSIOLOGY, finished.

Lectures combined with demonstrations, 3 a week.

Demonstrations to sections, from 1 to 3 a week for each student.

PATHOLOGICAL ANATOMY, begun.

Attendance at Autopsies, with practical instruction, twice a week for 4 weeks.

BACTERIOLOGY.

Laboratory Work, 2-hour exercises 3 times a week for one fourth of the year.

MATERIA MEDICA AND THERAPEUTICS, begun.

Lectures, 3 a week.

TOXICOLOGY.

Laboratory Work, 2-hour exercises twice a week for one fourth of the year.

OBSTETRICS AND GYNECOLOGY, begun.

Recitations combined with demonstrations to sections, 1 a week for each student.

EXAMINATIONS upon the work of the second year.

THIRD YEAR

MATERIA MEDICA AND THERAPEUTICS, finished.

Lectures, 3 a week.

PATHOLOGICAL ANATOMY, finished.

Demonstrations to sections, 2 a week for each student.

PATHOLOGICAL HISTOLOGY.

Laboratory Work, 2-hour exercises 3 times a week for one half the year.

THE PRACTICE OF MEDICINE, INCLUDING THE DISEASES OF THE MIND AND NERVOUS SYSTEM, begun.

Lectures, 3 a week.

Clinical Lectures at the Vanderbilt Clinic, once a week.

Clinical Lectures or instruction in the wards at the Roosevelt Hospital, once a week ; at the New York Hospital once a week for one half the year, twice a week for one half the year.

Practical Clinical Instruction to sections in physical diagnosis, for each student twice a week for 16 weeks.

Practical Clinical Instruction to sections in general diagnosis, for each student twice a week for 8 weeks.

THE PRINCIPLES AND PRACTICE OF SURGERY, begun.

Lectures, 3 a week.

Clinical Lectures at the Vanderbilt Clinic, once a week.

Clinical Lectures and the witnessing of operations at the New York or Roosevelt Hospital, once a week ; at the New York Hospital (in addition to the above), once a week for one half the year ; at the Presbyterian Hospital, once a week for one half the year.

Practical Clinical Instruction to sections, for each student twice a week for 16 weeks.

Optional—Clinical Lectures and the witnessing of operations at St. Luke's Hospital.

OBSTETRICS AND GYNECOLOGY, continued.

Lectures, 3 a week.

Clinical Lectures in Gynecology at the Vanderbilt Clinic, 1 a week.

Clinical Lectures and the witnessing of operations in Gynecology at the Roosevelt Hospital, by sections, 6 exercises for each student.

Practical Clinical Instruction to sections in Gynecology, 6 exercises for each student.

VENEREAL DISEASES.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Clinical Lectures at Bellevue Hospital, 1 a week for one half the year.

Practical Clinical Instruction to sections, 12 exercises for each student.

Optional—Clinics at the City Hospital, Blackwell's Island, 1 a week for three months.

DISEASES OF THE EYE.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 exercises for each student.

DISEASES OF THE EAR.

Practical Clinical Instruction to sections, 6 exercises for each student.

EXAMINATIONS upon the work of the third year.

FOURTH YEAR

THE PRACTICE OF MEDICINE, INCLUDING THE DISEASES OF THE MIND AND NERVOUS SYSTEM, finished.

Lectures, 3 a week.

Clinical Lectures at the Vanderbilt Clinic, 2 a week.

Clinical Lectures or Instruction in the wards, at the Roosevelt Hospital once a week ; at the New York Hospital once a week for 4 months.

Practical Clinical Instruction to sections in the wards of the Roosevelt or Bellevue Hospital, for each student 2-hour exercises, 3 times a week for 8 weeks.

Practical Clinical Instruction to sections in the diagnosis of diseases of the nervous system, 6 exercises for each student.

Optional—Clinical Instruction in Bellevue and Presbyterian Hospitals, once a week.

CLINICAL MICROSCOPY.

Laboratory Work, 2-hour exercises twice a week for 8 weeks.

THE PRINCIPLES AND PRACTICE OF SURGERY, finished.

Lectures, 3 a week.

Clinical Lecture at the Vanderbilt Clinic, 1 a week.

Clinical Lectures and the witnessing of operations at the New York or Roosevelt Hospital, once a week for one half the year ; at Bellevue Hospital, once a week for one half the year ; at the Presbyterian Hospital, once a week for one half the year.

Surgical Demonstrations at the Roosevelt Hospital, once a week for one half the year.

Practical Clinical Instruction to sections in the wards of Bellevue Hospital, for each student 2-hour exercises twice a week for 8 weeks.

Operative Surgery on the Cadaver for sections, 12 lessons ; required or elective as may hereafter be determined.

Optional—Clinical Lectures and the witnessing of operations at the New York Hospital (additional to the above) ; at St. Luke's Hospital ; at the Cancer Hospital.

ORTHOPÆDIC SURGERY.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 exercises for each student.

OBSTETRICS AND GYNECOLOGY, finished.

Attendance upon Confinements at the Sloane Maternity Hospital.

Practical Clinical Instruction in Obstetrics to sections, at the Sloane Maternity Hospital, for each student, daily for 1 week.

Clinical Lectures in Gynecology at the Vanderbilt Clinic, 1 a week.

DISEASES OF CHILDREN.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 lessons for each student.

DISEASES OF THE SKIN.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 lessons for each student.

DISEASES OF THE THROAT AND NOSE.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 lessons for each student.

EXAMINATIONS upon the work of the fourth year, *including an elective course or courses ; see below.*

Elective Courses

Each student of the fourth year will be required, within such time as shall be prescribed after the beginning of the academic year, to elect from a list of elective courses either one course or more, as shall be determined hereafter ; such election to be final.

The course or courses thus elected, the student will be required to attend, and he will be required also to be examined thereon as a prerequisite for the degree of M.D.

The elective courses will be numerous, and in various departments, both clinical and otherwise ; and the choice will not be confined to departments represented in the Faculty of Medicine, but will be extended to allied subjects.

In view of the wide range of choice thus to be provided for, no student will be admitted to any elective course unless his attainments shall be judged adequate by the head of the department in which the course is offered.

Elective courses will be organized, if possible, in the following themes or their subdivisions, and in such others as may be approved hereafter :

Surgical Diagnosis ;
Obstetrics ;
Diagnosis of Nervous Diseases ;
Localization of Nervous Diseases ;
Insanity (clinical course) ;
Ophthalmology ;
Venereal Diseases ;
Therapeutics of Diseases of the Skin ;
Contagious Diseases ;
Microscopic Technology ;
Pathological Anatomy and Histology of the Organs of Generation ;
Pathological Anatomy and Histology of the Nervous System ;
Cellular Biology ;
Comparative Embryology ;
Human and Comparative Morphology ;
Neuro-Muscular Physiology ;
Physiological Technique ;
Physiological and Experimental Psychology ;
Philosophy ;
Botany ;
Chemistry ;
Physics.

Examinations and Standing

Each student will be examined, each year, upon the work of that year.

A student's standing for the first year, in a given department, if found satisfactory, will not be invalidated by failure in other departments, or by failure in a subsequent year in the same department.

A second examination, for candidates found deficient at the close of the first year's work, will be held during the week before the opening of the following session.

No student will be permitted to advance with his class from the first to the second year, unless his standing shall have been found satisfactory, before the beginning of the work of the second year, in three out of the four departments of (1) Physics and Chemistry ; (2) Anatomy ; (3) Normal Histology ; (4) Physiology.

A student found deficient in one only of the four departments of the first year may be permitted to advance with his class, on condition that he make good his first year's standing, in the department in which he shall have failed, before being admitted to any of the examinations upon the studies of the second year held at the end thereof.

The standing of a student for the first year will be determined as follows :

1. *Physiology*, by an examination in writing upon the lectures and demonstrations of the year.

2. *Anatomy*, by (a) a record of the student's practical work during the year; (b) a practical examination; (c) a brief examination in writing.

3. *Normal Histology*, as for Anatomy.

4. *Physics and Chemistry*, by (a) a record of the student's practical work during the year; (b) a practical examination in Physics; (c) a practical examination in Chemistry; (d) an examination, in writing, in Physics and Chemistry.

A bad record of practical work in a department may bar a student from examination; or a bad practical examination may bar him from an examination in writing; the result in either case being failure in the year's work in that department.

Admission to Advanced Standing

Admission may be granted to advanced standing at the beginning of the second or of the third year, but not of the fourth year without the special consent of the Faculty.

Every applicant for advanced standing will be required (1) to present satisfactory evidence of having attended courses reasonably equivalent to those already attended by the class to which he seeks admission (see also "GRADUATION," p. 42); (2) to be examined for admission in all the subjects in which the said class shall have been examined already.

No one will be admitted to advanced standing in the four years' course at the beginning of the second year before October, 1895; or of the third year before October, 1896.

COURSES

The instruction is classified alphabetically under the following heads:

ANATOMY	OPHTHALMOLOGY
DISEASES OF CHILDREN	OTOLOGY
DERMATOLOGY	PATHOLOGY, including <i>Bacteriology</i> , <i>Normal Histology</i> , <i>Pathology</i> , and <i>Photography</i>
GYNECOLOGY	PHYSICS AND CHEMISTRY, including <i>Toxicology</i>
LARYNGOLOGY, including diseases of the <i>Larynx</i> , <i>Pharynx</i> , and <i>Nose</i>	PHYSIOLOGY
MATERIA MEDICA AND THERAPEUTICS	PRACTICE OF MEDICINE
NEUROLOGY, including diseases of the <i>Mind</i>	SURGERY
OBSTETRICS	VENEREAL DISEASES

See also CLINICS, p. 31.

The statements express, in each case, the instruction offered to a single student.

The Roman numerals prefixed to the several courses are the same as those employed in the Columbia College Catalogue.

ANATOMY

Courses

I—DEMONSTRATIONS TO SECTIONS OF THE CLASS.

(A) Osteology, syndesmology, myology, and angiology of the extremities; cranial osteology and syndesmology; the peripheral nervous system. 4 hours a week for one half the academic year, and 2 hours a week for one half the academic year.

This portion of the course is so arranged as to maintain, with reference to the subjects treated, a direct connection with the laboratory course in dissection, No. IV.

(B) Preliminary visceral course; anatomy of the viscera and body cavities. 1 hour a week throughout the academic year.

This portion of the course is designed to afford that general instruction in the descriptive anatomy and the relations of the viscera which is indispensable for the understanding of the courses in the normal histology and physiology of the viscera. ASSISTANT DEMONSTRATORS OF ANATOMY.

Required, in the first year, of candidates for the degree of M.D. in the four-years' course.

Elective for Seniors in the School of Arts.

II—GENERAL INTRODUCTION TO VERTEBRATE MORPHOLOGY—Development of vertebrate type—Anatomy of the locomotory apparatus, osteology, syndesmology, and myology—Peripheral vascular and nervous systems—Regional anatomy of the head and neck. Lectures 3 hours a week throughout the academic year. Professor HUNTINGTON

Required, in the second year, of candidates for the degree of M.D. in the three-years' course.

III—DEMONSTRATIONS TO SECTIONS OF THE CLASS—Anatomy of the mouth, pharynx, and larynx—The auditory apparatus—The central nervous system. 1 hour a week throughout the academic year. Dr. GALLAUDET

Required, in the second year, of candidates for the degree of M.D. in the three-years' course.

IV—LABORATORY COURSE—Dissection of a human body. 18 to 20 hours a week, at various hours, for from 3 to 5 periods of 4 weeks each. Professor HUNTINGTON, Dr. GALLAUDET, and the ASSISTANT DEMONSTRATORS OF ANATOMY

Required, in the first year, of candidates for the degree of M.D. in the four-years' course. Elective for Seniors in the School of Arts.

V—LABORATORY COURSE—Dissection of the human body. 10 to 12 hours a week for from 6 to 11 weeks. Professor HUNTINGTON, Dr. GALLAUDET, and the ASSISTANT DEMONSTRATORS OF ANATOMY

Required, in the second year, of candidates for the degree of M.D. in the three-years' course.

VI—LABORATORY COURSES IN ANIMAL MORPHOLOGY—No specified number of hours a week. Professor HUNTINGTON

Optional. for qualified candidates for the degree of M.D. Open as major or minor courses to candidates for the degree of A.M. or of Ph.D.

Research

VII—THE LABORATORY OF ANIMAL MORPHOLOGY is open for research, under the direction of the professor, to advanced workers. No definite number of hours a week. Professor HUNTINGTON

Fellowships

For the Fellowships, open to persons desiring to do special work under the Professor of Anatomy, see page 35.

Equipment

The laboratory facilities of the Department of Anatomy are very complete. The large general dissecting-room accommodates from 220 to 294 students at a time, working in groups of five or seven, respectively, at one table.

The recently completed erection of a plant for the production of artificial cold by the anhydrous ammonia process has enabled the department, through the means offered for the indefinite preservation of fresh subjects by the cold-storage system, greatly to increase the amount of material available for laboratory work; and has also rendered it possible so to regulate the temperature of the general laboratory that the work can be carried on without difficulty during the warmer months at the beginning and close of the academic year.

During the past year the laboratory for advanced morphological research has been completed, equipped with apparatus, and provided with steam power and plant, electricity, and ammonia-freezing and corrosion plants.

Every facility for advanced and research work in morphology is here extended. The established connections of the department furnish abundant human and comparative material, both mature and embryonal. During the eight months since the completion of the laboratory advanced work has been done by three graduates, and four students in medicine. The private library of the Professor of Anatomy is at the disposal of such workers.

Much work has been done in the formation of a Museum of Human and Comparative Anatomy, the ultimate design of which is to present, in as complete a manner as possible, a view of the evolution of the forms of animal life, and of their natural relations, both in series of natural groups, and in the comparative and relative position of organs and systems. Even the approximate attainment of this aim will require much time and work. For the present, the energies of the department are directed toward placing in position the very abundant vertebrate material already on hand, and the collection of models and casts pertaining chiefly to human anatomy. It is hoped that sufficient progress in these directions will be made before long to justify the opening of the museum. The collection, both as regards groups and the individual preparations, is designed for the illustration of both elementary and advanced courses.

In addition to the museum collection proper the department is constantly adding to a large collection for advanced study and research.

A study-collection of human osteological preparations is so administered as to enable every student to take out the different osteological series and retain them for private study as long as required.

DISEASES OF CHILDREN

Courses

I—CLINICAL LECTURES AT THE VANDERBILT CLINIC UPON THE DISEASES OF CHILDREN—I hour a week throughout the academic year. Professor JACOBI

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF CHILDREN—10 lessons for each student. Dr. FRANCIS HUBER

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

III—HOSPITAL CLINIC—Bellevue Hospital (see page 33), Mondays, 2.30 P.M., from April to June. Professor JACOBI

DERMATOLOGY

Courses

I—CLINICAL LECTURES AT THE VANDERBILT CLINIC UPON THE DISEASES OF THE SKIN—I hour a week throughout the academic year. Professor FOX

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE SKIN—6 lessons for each student. Dr. G. T. JACKSON

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

GYNECOLOGY

Courses

I—THE PRINCIPLES AND PRACTICE OF GYNECOLOGY—Didactic lectures; 3 hours a week from March 15th to the end of the academic year. Professor TUTTLE

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course.*

II—CLINICAL INSTRUCTION AT THE VANDERBILT CLINIC—I hour a week throughout the academic year. Professor TUTTLE
F. at 3 P.M.

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

III—PRACTICAL INSTRUCTION IN DIAGNOSIS, TREATMENT, AND THE USE OF INSTRUMENTS, INCLUDING ELECTRO-THERAPEUTICS—6 lessons for each student, at the Vanderbilt Clinic. Dr. LOCKE

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

IV—HOSPITAL CLINICS IN OPERATIVE GYNECOLOGY

Roosevelt Hospital, McLane Operating Theatre

To these clinics the students are invited in sections, to witness the various surgical operations of gynecology. Professor TUTTLE

Tu., Th., and S. at 2.30 P.M., throughout the academic year

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

The McLane Operating Theatre of the Roosevelt Hospital

(See also page 32.)

This is upon the hospital grounds immediately opposite the College of Physicians and Surgeons, and is one of the most thoroughly equipped buildings in this country for instruction in the surgery of gynecology.

The cases upon which operations are demonstrated are taken from the gynecological wards of the Roosevelt Hospital, which are under the exclusive direction of the Professor of Gynecology, and the cases in which are all available for the instruction given by him.

LARYNGOLOGY

(Including Diseases of the Larynx, Pharynx, and Nose.)

I—CLINICAL LECTURES AT THE VANDERBILT CLINIC UPON THE DISEASES OF THE THROAT AND NOSE, WITH LARYNGOSCOPIC AND RHINOSCOPIC DEMONSTRATIONS—1 hour a week for 23 weeks. Professor LEFFERTS

Tu. at 2 P.M.

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—DIAGNOSIS CLASSES IN THE DISEASES OF THE THROAT AND NOSE AT THE VANDERBILT CLINIC on Tuesdays at 2 P.M., from the completion of Course I to the close of the academic year. Preference as to admission to II is given to students who have attended Course III. 1 hour a week. Professor LEFFERTS

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

III—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE USE OF THE LARYNGOSCOPE AND RHINOSCOPE UPON THE "PHANTOM," AND UPON PATIENTS—The course is based upon the principle of short preliminary explanations, followed by practical work by the student, directly and personally supervised by the instructor. 6 lessons for each student. Dr. DELAVAN

Optional, in the third year, for candidates for the degree of M.D. *in the three years' course.*

Equipment

The department of Laryngology is equipped with a complete collection of the most approved modern instruments and appliances, by the best makers, for the diagnosis and treatment of the diseases of the throat and nose, and for the giving of instruction therein.

Among other things may be mentioned : a complete collection of the modern electric illuminating apparatus for the examination of patients ; the electric laryngoscope ; apparatus for the trans-illumination of the accessory cavities of the face ; dilators, canulæ, and other instruments used in the treatment of laryngeal stenosis ; operative instruments by Pfau of Berlin ; twelve laryngoscopic "phantoms," by Bock of Leipsic, for exercising the students in the use of the various instruments preliminary to the examination of the living subject ; between one and two hundred anatomical models of the healthy and diseased larynx, by Steiger of Leipsic, and Tobold of Berlin. Models of the normal larynx by Bock of Leipsic, and by Auzoux of Paris ; physiological models to illustrate the normal movements and the various paralyses of the vocal cords ; a diagrammatic model, to illustrate the mechanical interference of laryngeal neoplasms with the act of phonation ; photographs of the living larynx, in health and disease ; two hundred and eighty-seven water-color drawings by Wright of New York, of the pathological conditions of the larynx, pharynx, naso-pharynx, and nasal passages. These drawings are of large size to illustrate the clinical lectures. A collection of photogravures of frozen sections of the head, and of drawings and instruments to illustrate the operation of intubation.

The pathological and anatomical museum of the department contains at present one hundred and eleven carefully prepared and mounted wet preparations of the larynx and its diseases. This collection is specially rich in the rarer specimens, such as benign neoplasms of the larynx, intrinsic and extrinsic, laryngeal cancer, and others.

MATERIA MEDICA AND THERAPEUTICS

Courses

Instruction in this department is both didactic and clinical.

I—THE DIDACTIC COURSE embraces general therapeutic considerations ; modes of administering drugs ; the individual drugs used in treating disease, their physiological effects and therapeutic uses, and the toxicological effects of such of them as are poisons ; remedial measures other than the use of drugs, including electricity, dietetics, the use of water (including bathing and the administration of mineral waters) ; physical exercise, and the like.

The department has a full collection of all the drugs lectured upon, as well as of their important preparations. After each lecture every student has an opportunity of examining specimens of all the drugs and preparations that formed the subject of the lecture. Lectures, 3 hours a week. Professor PEABODY

Required, in the second and third years, of candidates for the degree of M.D. in the *three-years' course*.

II—THE CLINICAL INSTRUCTION in therapeutics is given at the bedside in the wards of the New York Hospital. See also pages 29 and 33.

A large number of patients are presented to the class, and abundant opportunity is afforded of observing the modifications in the natural course of diseases which are produced by therapeutic procedures, including not only the

action of drugs, but also the effects of such remedial measures as cold baths, wet packs, electricity, and the like.

Frequent opportunity is also given for the personal examination of patients by members of the class in attendance; and the entire course of protracted diseases, with their variations in symptoms and physical signs as well as their treatment, can thus be observed.

Facilities are also extended for witnessing the performance of autopsies in fatal cases as frequently as the hospital regulations permit.

Twice a week for 3 months (M. and Th. at 2.30 P.M.). Professor PEABODY

Optional, in the second and third years, for candidates for the degree of M.D. *in the three-years' course.* Medical students are recommended to attend this course in the third year only

NEUROLOGY

Courses

I—THE DISEASES OF THE MIND AND NERVOUS SYSTEM—Didactic lectures, 1 hour a week for 5 months; and 6 demonstrations, illustrated with the magic lantern, of the pathology of nervous diseases. Professor STARR

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course.*

II—CLINICAL LECTURES AT THE VANDERBILT CLINIC—At these clinics all forms of nervous disease, including insanity, are demonstrated. During the months of didactic instruction the clinics are so arranged as to illustrate the clinical side of the subject lectured upon. 1 hour a week during the entire academic year. Professor STARR

F, at 2 P.M.

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course.*

III—PRACTICAL INSTRUCTION IN NEUROLOGY—"Section teaching" by the Chief of Clinic, at which a division of ten students is taught the practical examination of nervous patients, including electro-diagnosis and electro-therapeutics. 6 lessons for each student at the Vanderbilt Clinic. Dr. PETERSON

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

IV—INSANITY—10 clinics at the Ward's Island Insane Asylum. Dr. PETERSON

Optional, in the second and third years, for candidates for the degree of M.D. *in the three-years' course.*

OBSTETRICS

Courses

I—THEORY AND PRACTICE OF OBSTETRICS—Lectures, 3 hours a week from October 1st to March 15th. Professor McLANE

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course.*

II—PRACTICAL INSTRUCTION AT THE SLOANE MATERNITY HOSPITAL—

Members of the graduating class in medicine are required each to attend at this hospital a certain number of cases of labor. For this purpose the students of the third year are divided, at the beginning of the academic year, into sections of six, each section remaining on duty for one week. During this time they are furnished with lodgings, free of charge, on the grounds of the Medical School. Their rooms are connected with the hospital by electric wires, so that they may be summoned quickly to cases of emergency. Daily bedside instruction is given by the Instructor, who is the Resident Physician at the Sloane Hospital, and an examination on the work of the week is held there by him every Saturday. A daily clinical lecture is also given at the hospital. No specified number of hours a week. Dr. TUCKER

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

The Sloane Maternity Hospital

(See also page 8.)

This is upon the grounds of the College of Physicians and Surgeons, and the service at the hospital is under the exclusive direction of the Professor of Obstetrics, the Instructor being also the Resident Physician, as above stated.

The number of deliveries averages over seven hundred a year. These, with the obstetric operations, and the subsequent treatment of women and infants, afford invaluable bedside experience, such as is offered at no other medical school in this country.

OPHTHALMOLOGY

Courses

I—CLINICAL LECTURES AT THE VANDERBILT CLINIC UPON THE DISEASES OF THE EYE—In selected cases the diagnosis is made, treatment is applied, and operations are performed before the class

After the lectures, as opportunity offers, microscopic demonstrations of the pathological histology of the eye are made by Dr. Holden. 1 hour a week throughout the academic year. Professor KNAPP

Tu. at 3 P.M.

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE USE OF THE OPHTHALMOSCOPE—6 lessons for each student. DR. MAY

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

III—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE REFRACTION AND MOTILITY OF THE EYE—6 lessons for each student. DR. CLAIBORNE

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

IV—HOSPITAL CLINICS IN THE DISEASES AND THE OPERATIVE SURGERY OF THE EYE AT THE NEW YORK OPHTHALMIC AND AURAL INSTITUTE, 46 East 12th Street. (See page 34.) To these clinics the students are invited in sections. Professor KNAPP

S. at 2.30 P.M., throughout the academic year.

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

OTOLOGY

Courses

I—PRACTICAL INSTRUCTION IN THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE EAR AT THE VANDERBILT CLINIC—6 lessons for each student. Professor BUCK

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

DEPARTMENT OF PATHOLOGY

(Including Bacteriology, Normal Histology, Pathology, and Photography.)

General Statement

For convenience of administration, and for the better association of allied themes, the laboratories of Pathology, Normal Histology, Bacteriology, and Photography are grouped together in the Department of Pathology under the direction of the Professor of Pathology.

Courses in Pathology

(See also page 34.)

I—PRACTICAL INSTRUCTION IN PATHOLOGICAL ANATOMY AND HISTOLOGY, AND IN BACTERIOLOGY AS APPLIED TO MEDICINE, is given in the large laboratory on the top floor of the north wing of the Medical School. Each student is given about one hundred sections or other permanent preparations, illustrating the more important and common lesions. These he mounts for the microscope and studies, making notes and sketches. This collection of specimens he retains for future reference.

Demonstrations of gross pathological specimens are made as the material is gathered, and the members of the class may attend the autopsies held at the Roosevelt and Bellevue Hospitals.

The systematic course opens with a study of the various phases of inflammation; tumors are next studied. The methods of staining, examining, and cultivating bacteria and other micro-organisms are then illustrated, and the student himself prepares, stains, and studies most of the more important pathogenic germs. The remainder of the course is devoted to the systematic study of the lesions of the viscera. Each student is furnished with a microscope

and the necessary instruments and reagents. Delafield and Prudden's Handbook of Pathological Anatomy and Histology is used as a text-book in this course. 6 hours a week for one half of the academic year. Professor PRUDDEN and Drs. HODENPYL, ELY, CHEESMAN, and BAILEY

Required, in the third year, of candidates for the degree of M.D. in the three-years' course.

II—PATHOLOGICAL ANATOMY AND HISTOLOGY, EXPERIMENTAL PATHOLOGY, AND APPLIED BACTERIOLOGY—A limited number of graduates in medicine, or other advanced workers, is admitted to the special laboratories for the pursuit of advanced lines of study in these themes. No definite number of hours a week. Professor PRUDDEN, Drs. HODENPYL, CHEESMAN, FREEBORN, and VAN GIESON

Courses in Normal Histology

I—PRACTICAL INSTRUCTION IN THE LARGE LABORATORY, which occupies the entire upper floor of the north wing of the College of Physicians and Surgeons. Sections and other preparations of the more important structures of the normal body are given to each student during the course. These he is required to mount and study under the microscope, making notes and drawings of the entire series of specimens. This collection he retains for future reference. Each student is supplied with a microscope and with a tray of instruments and reagents. Prudden's Manual of Normal Histology is used as a text-book in this course—6 hours a week for one half of the academic year. Drs. FREEBORN, VAN GIESON, EWING, POWER, and KITCHEL

Required, in the first year, of candidates for the degree of M.D. in the four-years' course. Elective for Seniors in the School of Arts.

II—PRACTICAL INSTRUCTION IN MICROSCOPIC TECHNOLOGY AND ADVANCED NORMAL HISTOLOGY is given to a limited number of graduates in medicine, or other qualified workers, in the special laboratory on the second floor of the north wing of the Medical School. No definite number of hours a week. Drs. FREEBORN and VAN GIESON

Courses in Bacteriology

For required instruction for medical students in Bacteriology as applied to Medicine, see Pathology I, page 22.

For optional instruction in the same for advanced workers, see Pathology II, above.

I—LABORATORY COURSE—There is opportunity each year for a few graduates in medicine, or other qualified workers, to receive special courses in practical elementary bacteriology. The laboratory is abundantly supplied with apparatus for the culture and study of micro-organisms, and has under cultivation a large collection of identified species. In these courses the special applications of bacteriology to practical medicine are held in view. They require attendance at the laboratory during the entire day for from 1 to 3 months. Dr. CHEESMAN

II—LABORATORY COURSE—Methods of preparation, staining, microscopic study, measurement, etc., of bacteria. Preparation of culture media ; study and record of observations, of selected typical species ; systematic analyses for determination of unknown species ; methods of isolation of species ; qualitative and quantitative biological examinations of water, soil, and air ; methods of determining pathogenic properties, disinfection, modes of testing value of germicides. Text-book : Sternberg's Bacteriology.

Minor for the degree of A.M. or of Ph.D.

III—LABORATORY COURSE—As under Course II, with additional study and determination of known species of bacteria ; special study of the chemical products eliminated in the growth of bacteria, and the pursuit of some selected theme for original investigation.

Major for the degree of A.M. or of Ph.D.

Research

Research in pathology and in bacteriology may be pursued in the laboratories of this department by a limited number of graduate students or practitioners of medicine or other advanced workers under the direction of the professor. To such men the large collection of pathologic specimens preserved for microscopic study, and the collection of bacterial cultures belonging to this department, are accessible. No specified number of hours a week. Professor PRUDEN

Fellowships

For the Fellowships open to persons wishing to do special work under the Professor of Pathology, see page 35.

Museum

The museum of pathology is made use of in the work of this department, both for the instruction of medical students, and as a place of deposit for specimens showing new or rare forms of lesions.

Photography

Facilities for gross photography of cases or of specimens, and for photomicrography, in charge of Dr. LEAMING, have been recently provided in connection with this department. These facilities may be made use of by other departments also. They are largely drawn upon in recording the results of special forms of research in pathology and bacteriology.

PHYSICS AND CHEMISTRY

(Including Toxicology.)

Courses

II—PHYSICS AND GENERAL CHEMISTRY—The general properties of matter ; heat ; light ; electricity ; the general principles and laws of chemical combination ; the history, occurrence, preparation, properties, and uses, of the more

important elements and their compounds. Special attention is devoted to the applications of chemistry to hygiene and medicine. Text-books : Ganot's Physics, or Barker's Physics ; Fownes' Chemistry.

Lectures combined with demonstrations, 4 hours a week throughout the academic year. Professor CHANDLER, assisted by Mr. PELLEW, Dr. DEGHUÉE, and Mr. JOHNSON

Required, in the first year, of candidates for the degree of M.D. in the four-years' course. Elective for Seniors in the School of Arts.

XXXI—PRACTICAL INSTRUCTION IN PHYSICS—*At the Physical Laboratory, Hamilton Hall, corner of 49th Street and Madison Avenue.* The work will include : accurate measurements of length, area, and volume, weighing, determinations of specific gravity in several ways ; the use and testing of hydrometers and thermometers ; experiments in acoustics. Much attention will be given to the principles of lenses and optical instruments used in medicine. Microscopes will be tested for the correction of their lenses, magnifying power, and other properties. Analyses of mixtures will be made with the spectroscope, absorption spectra will be studied, also indices of refraction, and work will be performed with the polariscope. In electricity the student will be made practically familiar with the fundamental principles and measurements of electromotive force, current, and resistance, determinations of these quantities being made with many different forms of instruments and by various methods.

Laboratory work, 2 hours a week for one half of the academic year, under the direction of Professor ROOD.

Professor HALLOCK, Mr. CUSHMAN, Mr. GORDON, and Mr. PARKER, assisted by Mr. TROWBRIDGE, Mr. H. S. CURTIS, and Mr. WADE

Required, in the first year, of candidates for the degree of M.D. in the four-years' course. Elective for Seniors in the School of Arts.

XXVIII—PRACTICAL INSTRUCTION IN PHYSIOLOGICAL AND MEDICAL CHEMISTRY—The preparation and study of typical animal and vegetable substances, such as the carbo-hydrates, the fats, the proteids, and of the inorganic matters of most importance, including the commonest acids, bases, and salts ; distillation ; fermentation ; artificial digestion ; the sanitary analysis of drinking water ; and the properties of blood, milk, and bile.

The last portion of the course is devoted to the microscopical and chemical examination of the urine. Quantitative methods are taught in this as far as practicable, and the students are required to examine carefully numerous samples of pathological urines collected from the various hospitals and clinics of the city.

The spectroscope and microscope are brought into use wherever of value in connection with chemical work.

Text-book : Pellew's Manual of Medical and Physiological Chemistry.

Laboratory Work, 4 hours a week for one half of the academic year.

Conferences, each week, on the subjects dealt with in the laboratory work of that week. 2 hours a week for one half of the academic year.

Mr. PELLEW, Dr. DEGHUÉE, and Mr. JOHNSON.

Required, in the first year of candidates for the degree of M.D. in the four-years' course. Elective for Seniors in the School of Arts. Minor for the degree of A.M.

XXXI—PRACTICAL INSTRUCTION IN TOXICOLOGY—The students will be given samples of the commoner poisons, mineral and organic, and will be instructed in their composition, physical and chemical properties, and tests.

The class will be limited to twenty students, who must have had previous instruction in the regular first-year course in physiological and medical chemistry, or its equivalent.

Laboratory work—20 exercises for each student. Mr. PELLEW.

Optional, for qualified candidates for the degree of M.D.

Equipment

The lectures of Course II, given at the building of the School of Medicine, are fully illustrated by experiment. There is a large collection of the chemical elements and their compounds, both natural and artificial, for this purpose; and an ample outfit of modern apparatus.

Of this there may be referred to : balances for determining specific gravity and illustrating the principle of Archimedes; air-pump and accessories; apparatus for illustrating the laws of heat, including appliances for the liquefaction of gases, distillation, and other processes, and Melloni's apparatus for radiant heat; optical instruments, including the requisites for demonstrating to a large audience spectrum analysis and polarized light; machines and appliances for statical electricity; galvanic and thermo-batteries, magneto and dynamo-machines; medical batteries; Ruhmkorff coils, both large and small.

The electric telegraph, electrolysis and electro-metallurgy, electric lighting, both arc and incandescent, and the telephone are shown in their various forms.

The laboratories of physiological and medical chemistry and toxicology are also at the School of Medicine, and are abundantly supplied with appliances for practical work, including microscopes and spectrosopes.

The department of Physics, by which the laboratory instruction is given in this subject, occupies nine rooms at the School of Arts. These are supplied with the street current of the Edison incandescent system.

Among the many pieces of apparatus here, the following may be especially mentioned :

For measurements of length, three linear and three circular dividing engines, a Geneva Society comparator and dividing engine; a Grunow cathetometer, spherometers, optical levers, and micrometers of many kinds.

For measurements of mass, eight balances with weights, specific-gravity apparatus, hydrometers, aërometers, Westfall and Jolly balances, and the various forms of vapor-density apparatus.

Standard mercurial barometers, aneroid and Mariotti barometers, Kater's and Borda's pendulums, and apparatus for studying elasticity; also monochords, Quincke's apparatus, Kundt's dust figure apparatus, and sets of organ pipes and tuning-forks for the study of sound. Thermometers and apparatus for calibration and determination of zero and boiling points; also apparatus for the determination of co-efficients of expansion, for latent and specific heats, and for air-thermometry and calorimetry.

The optical rooms are furnished with eight spectrometers of different designs, small telescopes, opera glasses, microscopes, sets of lenses, prisms, gratings, goniometers, sextant, optical benches, photometers, saccharimeters, total reflectometers and apparatus for calorimetry, polarized light, and spectroscopy.

In the rooms devoted to electricity are nine galvanometers of various patterns, high and low resistance, ballistic and dampened; electrometers, magnetometers, rheostats, and bridges of all types; condensers, batteries, keys, arc and incandescent lamps, ammeters, and voltmeters.

PHYSIOLOGY

Courses

I—GENERAL PHYSIOLOGY—Structure of protoplasm; physiology of the cell; irritability; contractility; heliotropism; physiological division of labor and evolution of special functions; general principles of secretion; the nerve cell; the germ cells. Lectures, 1 hour a week. Dr. LEE

Elective for Seniors who have had at least one year of General Biology.

II—HUMAN PHYSIOLOGY AS RELATED TO THAT OF OTHER MAMMALS AND OF LOWER VERTEBRATES—Lectures and demonstrations, 4 to 6 hours a week. Beginning with the session of 1894-95, this course will treat of different portions of its subject in alternate years, certain introductory lectures only being repeated annually. Professor CURTIS and Dr. LEE

Required, in the first year of the *four-years' course*, and in the second year of the *three-years' course*, of candidates for the degree of M.D.

Elective for Seniors in the School of Arts. Open as a minor to candidates for the degree of A.M.; and as a minor, in the first year, to candidates for the degree of Ph.D.

III—LABORATORY COURSES—Personal instruction, private reading, practical work, and research. No definite number of hours a week. Professor CURTIS and Dr. LEE

Optional for qualified candidates for the degree of M.D. Open as major or minor courses to qualified candidates for the degree of A.M., or of Ph.D.

Research

IV—THE LABORATORY is open for research, under the direction of its officers, to advanced workers. No definite number of hours a week. Professor CURTIS and Dr. LEE

Fellowships

For the Fellowships open to persons desiring to do special work under the Professor of Physiology, see page 35.

Equipment

The department of Physiology possesses:

(1) The main laboratory, for research and the preparing of demonstrations, covering 1769 square feet and lighted on three sides.

(2) Two rooms for optical or psychological work or for photography, communicating with the main laboratory and with one another. One of these has a free southerly exposure for the heliostat.

(3) The Swift Physiological Cabinet, for the accommodation of a specially endowed and very full collection of apparatus of precision, mainly for research.

(4) A smaller laboratory, for the officers of the department.

(5) Easy access to a large lecture-room, specially fitted for experimental teaching; and to demonstration-rooms for small classes.

The physiological journals in English, German, and French are accessible at the laboratory to advanced students; also the most important monographs and other books, both modern and ancient.

A skilled mechanic is employed to devote his entire working time, at the laboratory, to the care and improvement of the plant, including the making, altering, and repairing of special apparatus. He also assists in the scientific manipulations.

The following machines and apparatus deserve mention:

An upright seven-horse-power steam-engine, mounted against a pier upon an iron bracket, to avoid floor vibrations, and working a shaft which runs the whole length of the main laboratory; two steam lathes; apparatus worked by steam for artificial respiration; Ludwig's "Schlagwähler"; kymograph for the long roll of paper, and high-speed drum kymograph, both worked by steam; high-speed drum kymograph worked by weights; two drum kymographs of the spring pattern; three "Basel stands" for the fine adjustment of recording levers; Zeiss scales and other instruments for reading and measuring curves, including a planimeter; electro-magnetic chronographs and control-hammer; seconds pendulum; interrupter clock; automatic dry-contact tuning-forks; short-beam quantitative balance; copper voltameter; milliampère- and ampère-meters; Wiedemann-duBois galvanometer, with coils of high and low resistance, Haüy's bar, telescope, and milk-glass scale; capillary electrometers; ohmmeter, for resistances of from 0.001 to 200,000 ohms; Edelmann's faradimeter; five horizontal duBois induction coils; two upright ditto; a complete collection of duBois-Reymond's other apparatus; moist chambers and muscle levers; upright rheochord; mechanical tetanomotor; differential rheotome; Marey's tambours, cardiographs, stethograph, and explorer of the human muscles; sphygmographs; plethysmograph; two recording mercurial manometers; spring manometers; tonographs; "stromuhr"; frog-heart apparatus; thermo-electric apparatus; constant-pressure injection apparatus; two mercurial gas-pumps; large spectroscope; direct vision spectroscope; Ladd spectroscope; four microspectroscopes; heliostat; eight microscopes; aquarium.

PRACTICE OF MEDICINE

Courses

I.—THE PRACTICE OF MEDICINE—Didactic lectures. 2 hours a week for 5 months, and 3 hours a week for 3 months. Professor DELAFIELD

Required, in the second and third years, of candidates for the degree of M.D. in the three-years' course.

II—CLINICAL LECTURES ON GENERAL MEDICINE AT THE VANDERBILT CLINIC—I hour a week throughout the academic year. Professor DELAFIELD Th., at 3 P.M.

Required, in the second year, of candidates for the degree of M.D. *in the three-years' course.*

III—PHYSICAL DIAGNOSIS—Practical instruction ; 21 lessons for each student. Drs. JACKSON and LOCKWOOD

Required, in the second year, of candidates for the degree of M.D. *in the three-years' course.*

IV—HOSPITAL CLINICS IN GENERAL MEDICINE--Roosevelt Hospital (see page 32). Professors DELAFIELD and DRAPER and Dr. ROOSEVELT

M., at 4 P.M., throughout the academic year

New York Hospital (see page 33). Professors DRAPER and PEABODY. (See "Materia Medica and Therapeutics.")

M. and Th. at 2.30 P.M., in November, December, January, February, and March

Bellevue Hospital (see page 33). Drs. ROOSEVELT and JAMES, and Professor JACOBI. (See "Children, Diseases of.")

Tu. at 1.30 P.M. throughout the year

Presbyterian Hospital (see page 33). Professor KINNICUTT

Days and hours will be announced early in 1894-95

Attendance at Hospital Clinics is optional in the second and third years for candidates for the degree of M.D. *in the three-years' course.*

V—HOSPITAL CLINICS IN CONTAGIOUS DISEASES—Willard Parker and Riverside Hospitals (see page 34). Dr. BRANNAN

Admission by invitation of small sections, after special registration

Tu. and S. at 3 P.M., in November, December, March, and April

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

SURGERY

Courses

I—SURGICAL PATHOLOGY, GENERAL AND REGIONAL SURGERY—Didactic lectures, 3 hours a week throughout the academic year. Professors BULL and WEIR

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course.*

II—CLINICS IN GENERAL SURGERY AT THE VANDERBILT CLINIC—I hour a week throughout the year. Professors BULL and WEIR

M. at 12 M.

Required, in the second year, of candidates for the degree of M.D. *in the three-years' course.*

III—MINOR SURGERY AND BANDAGING—Practical instruction at the Vanderbilt Clinic. 12 lessons for each student. Dr. B. F. CURTIS

Required, in the second year, of candidates for the degree of M.D. *in the three-years' course.*

IV—ORTHOPÆDIC SURGERY—Practical instruction at the Vanderbilt Clinic. 12 lessons for each student. Dr. WHITMAN

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

V—OPERATIVE SURGERY UPON THE CADAVER—Practical instruction to classes of six members each. Each student performs for himself upon the cadaver the principal operations, including the ligation of arteries, amputations, resections, and the removal of parts. Special attention is paid to operations upon the abdominal viscera. 13 to 14 lessons for each student. Drs. HARTLEY and PARKER

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

VI—HOSPITAL CLINICS IN GENERAL AND OPERATIVE SURGERY—New York Hospital. (See page 33.)

S. at 2.30 P.M. throughout the academic year. Professors BULL and WEIR

W. at 2.30 P.M. from February to June. Professor WEIR

Th. at 3 P.M. from February to June. Dr. HARTLEY

Roosevelt Hospital, Syms Operating Theatre. (See page 32.)

S. at 2.30 P.M. throughout the academic year. Professor MCBURNEY

Bellevue Hospital. (See page 33.)

Th. at 2.30 P.M. throughout the academic year. Drs. F. H. MARKOE and GALLAUDET

St. Luke's Hospital. (See page 33.)

Th. at 2.30 P.M. from October to January. Dr. B. F. CURTIS

F. at 2.30 P.M. from October to February. Dr. F. H. MARKOE

Presbyterian Hospital. (See page 33.)

Tu. at 2.30 P.M. throughout the academic year. Dr. MCCOSH

Cancer Hospital. (See page 34.)

Th. at 2.30 P.M. from February to May. Dr. B. F. CURTIS

Attendance at Hospital Clinics is optional, in the second and third years, for candidates for the degree of M.D. *in the three-years' course.*

VENEREAL DISEASES

Courses

I—VENEREAL AND GENITO-URINARY DISEASES—Clinical lectures at the Vanderbilt Clinic. 1 hour a week throughout the academic year. Professor TAYLOR

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE DIAGNOSIS AND TREATMENT OF VENEREAL AND GENITO-URINARY DISEASES—6 lessons for each student. Dr. HAYDEN

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

III—HOSPITAL CLINICS IN VENEREAL AND GENITO-URINARY DISEASES.

—Bellevue Hospital. (See page 33.)

Tu. at 2 P.M. throughout the academic year. Professor TAYLOR

City Hospital, Blackwell's Island (formerly Charity Hospital). See page 34.

W. at 2 P.M., October 1st to January 1st. Dr. HAYDEN

The Hospital Clinics are optional, in the third year, for candidates for the degree of M.D. in the three-years' course.

TEXT-BOOKS AND INSTRUMENTS

The following list comprises the text-books and instruments recommended. The text-books are *for reference only*, unless otherwise specified in the notices of the several departments.

For the convenience of those who wish to reckon up their expenses in advance, there are appended the lowest prices at which the books, in cloth bindings, can be purchased in New York. These prices are liable to fluctuations. As a rule, the latest editions only of text-books should be purchased:

Gray's Anatomy (with colored plates), \$5.60; *or* Quain's Anatomy, new edition not yet completed; Foster's Physiology, \$3.60; Fownes' Chemistry, \$2.20; Ganot's Physics, \$4; *or* Barker's Physics, \$4.50; Pellew's Medical and Physiological Chemistry, \$2; H. C. Wood's Therapeutics, \$4.80; E. Curtis' General Medicinal Technology, 80 cents; Hare's Practical Therapeutics, \$3; Senn's Principles of Surgery, \$4.50; Treves' Manual of Surgery, \$4.80; American Text-Book of Surgery, \$7; Playfair's Midwifery, \$3.20; *or* Lusk's Midwifery, \$4; August Martin's Diseases of Women, \$3.20; *or* Hart and Barbour's Manual of Gynecology, \$5.60; Pepper, American Text-Book of Medicine, \$10; Delafield and Prudden's Pathological Anatomy and Histology, \$4.80; Prudden's Normal Histology, \$1; Ashby and Wright on the Diseases of Children, \$4.00; Bumstead and Taylor on Venereal Diseases; Swanzy's Diseases of the Eye, \$2.40; Buck's Manual of Diseases of the Ear, \$2; Jackson's Handbook of Skin Diseases, \$2.20; Bosworth, Diseases of the Nose and Throat, \$9.60; Gowers' Diseases of the Nervous System, \$6.40; Dana, Text-Book of Nervous Diseases, \$2.60; Kirchoff, Handbook of Insanity, \$2.20.

A "dissecting case," containing all the necessary instruments, can be bought for from \$2.35 to \$3.35.

CLINICS

The clinical courses offered for 1894-95 are all given under their appropriate headings in the foregoing pages, in connection with the didactic teaching.

It seems proper also to make the following connected statement of the opportunities for clinical study in all branches which are available for matriculates of the College of Physicians and Surgeons.

When not otherwise specified, the exercise is a clinical lecture, clinical "section teaching" being noticed, in what follows, only in certain cases. For the courses in "section teaching" the reader is referred to the foregoing classified

statements of instruction. At many clinics operations performed before the class are an important feature.

All the clinical instruction for 1894-95 is in connection with the three-years' course.

Clinics at the Vanderbilt Clinic

(See page 8.)

Ten clinics are given each week at the Vanderbilt Clinic, as follows :

SURGICAL—Professors BULL and WEIR ; Mondays, 12 M.

DISEASES OF THE EAR—Professor BUCK ; Clinical Instruction to Sections ; Mondays, 2 P.M.

DISEASES OF THE SKIN—Professor FOX ; Mondays, 3 P.M.

DISEASES OF THE THROAT AND NOSE (with laryngoscopic and rhinoscopic demonstrations)—Professor LEFFERTS ; Tuesdays, 2 P.M.

DISEASES OF THE EYE—Professor KNAPP ; Tuesdays, 3 P.M.

DISEASES OF CHILDREN—Professor JACOBI ; Wednesdays, 2.30 P.M.

VENEREAL DISEASES—Professor TAYLOR ; Thursdays, 2 P.M.

MEDICAL—Professor DELAFIELD ; Thursdays, 3 P.M.

DISEASES OF THE MIND AND NERVOUS SYSTEM—Professor STARR ; Fridays, 2 P.M.

DISEASES OF WOMEN—Professor TUTTLE ; Fridays, 3 P.M.

Hospital Clinics

See the several departments. For appointments to the house-staffs of the hospitals, see page 35.

Besides the Vanderbilt clinic, the general and special hospitals of New York afford most important fields for clinical teaching. This college is strongly represented on the staffs of these institutions, and regular clinical instruction at hospitals is made a prominent feature of the curriculum. *Admission is free* to all matriculated students. At all the following hospitals instruction is given by officers of the college.

SLOANE MATERNITY HOSPITAL, corner of Fifty-ninth Street and Tenth Avenue. See pages 8 and 21.

ROOSEVELT HOSPITAL—This has long been the seat of thorough clinical work, and has become of special importance in this respect from its position immediately opposite the new buildings of the College of Physicians and Surgeons upon Fifty-ninth Street, between Ninth and Tenth Avenues. Moreover, this hospital, a few years ago, received a bequest of several hundred thousand dollars for the erection and endowment of THE SYMS OPERATING THEATRE, which now offers unrivalled facilities for instruction in operative surgery.

THE MCLANE OPERATING THEATRE is used for operative gynecology by Professor Tuttle exclusively. See page 18.

The Roosevelt is a general hospital of one hundred and eighty beds, and it also possesses a flourishing out-patient department.

Public clinics are given here as follows, throughout the college session :

Medical—Mondays at 4 P.M., Professors DELAFIELD and DRAPER and Dr. ROOSEVELT

Surgical—Saturdays, at 2.30 P.M., Professor MCBURNEY

Gynecological—Tuesdays, Thursdays, and Saturdays, at 2.30 P.M., Professor TUTTLE. Admission, by invitation, to operations.

NEW YORK HOSPITAL, Fifteenth Street, between Fifth and Sixth Avenues—Reached from the Medical College by taking the Sixth Avenue Elevated Railroad at the corner of Ninth Avenue and Fifty-ninth Street, and leaving the cars at the corner of Fourteenth Street and Sixth Avenue; or by the surface cars.

This is a general hospital of the highest class, of one hundred and fifty beds, with an out-patient department.

The public clinics are the :

Medical—Mondays and Thursdays, at 2.30 P.M., from November to March; Professors DRAPER and PEABODY

Surgical—Wednesdays, 2.30 P.M., February to June, Professor WEIR; Saturdays, 2.30 P.M., Professors WEIR and BULL; Thursdays, at 3 P.M., February to June, Dr. HARTLEY

BELLEVUE HOSPITAL, Twenty-sixth Street and East River—Directly accessible from the college by the horse-cars of the Belt Line, which run from the door of the college to that of the hospital; or, by leaving the horse-car at the corner of Fifty-ninth Street and Third Avenue, and taking the Third Avenue Elevated train to the corner of Third Avenue and Twenty-eighth Street.

This hospital has eight hundred beds and receives sixteen thousand patients annually, of whom one fourth are in the exclusive charge of officers of this college.

The service of the out-patient department also covers a great range of practice; and two newly built operating theatres, a large and a smaller one, are in full use.

The following clinics are held here during the session :

Medical—Tuesdays, 1.30 P.M., Professor JACOBI, and Drs. ROOSEVELT and JAMES

Surgical—Thursdays, 2.30 P.M., Drs. F. H. MARKOE and GALLAUDET

Diseases of Children—Mondays, 2.30 P.M., from April to June, Professor JACOBI

Venereal and Genito-Urinary—Tuesdays, 2 P.M., Professor TAYLOR

ST. LUKE'S HOSPITAL, Fifth Avenue and Fifty-fourth Street

Surgical—Dr. F. H. MARKOE gives a clinic to which students are admitted on Fridays, at 2.30 P.M., from August to February; and Dr. B. F. CURTIS, Thursdays, 2.30 P.M., from October to January.

PRESBYTERIAN HOSPITAL, Madison Avenue and Seventieth Street—Accessible from the Medical School by the Fifty-ninth Street horse-cars of the Belt Line to Madison Avenue, and by the cars on this avenue to Seventieth Street.

This is a large general hospital of three hundred and thirty beds. The following clinics will be held here throughout the session :

Surgical—Tuesdays, 2.30 P.M., Dr. MCCOSH

Medical—Professor KINNICUTT. Days and hours to be announced early in 1894-95

CITY HOSPITAL, formerly CHARITY HOSPITAL, Blackwell's Island, East River—To reach this institution the steamer should be taken at the foot of East Fifty-second Street. This hospital offers a peculiarly rich field for the study of venereal diseases, over two thousand such cases being received yearly. Dr. HAYDEN gives a clinic as follows :

Venereal—Wednesdays, 2 P.M., from October 1st to January 1st

WILLARD PARKER HOSPITAL, foot of East 16th Street ; reached from the medical school by the cars of the Belt Line : RIVERSIDE HOSPITAL, North Brother Island, East River ; reached by special boat from the foot of East 128th Street.

These hospitals, in charge of the New York City Health Department, offer a rich field for the study of *Contagious Diseases* not admitted to other hospitals in the city, such as diphtheria, scarlet fever, small-pox, typhus fever, measles, and others. Dr. J. W. BRANNAN gives a clinic to which students are admitted in small sections after special registration, on Tuesdays and Saturdays, at 3 P.M., in November, December, March, and April.

NEW YORK CANCER HOSPITAL, One Hundred and Sixth Street and Eighth Avenue—Elevated Railroad station, One Hundred and Fourth Street and Ninth Avenue. It can be reached also by the Eighth Avenue surface road.

One clinic a week is held here, viz.:

Surgical—From February to May. Thursdays, 2.30 P.M. Dr. B. F. CURTIS

NEW YORK OPHTHALMIC AND AURAL INSTITUTE, 46 East Twelfth Street—Reached by the Sixth Avenue Elevated train, which should be left at the Fourteenth Street station ; or by the surface cars.

This hospital has thirty beds, and a large daily dispensary service is held for diseases of the eye and ear. Throughout the session the following clinic is held :

Ophthalmological—(Admission by invitation of sections.) Selected cases for diagnosis ; the most important operations on the eye. Saturdays, 2.30 to 5 P.M. Professor KNAPP

DEMONSTRATIONS OF PATHOLOGICAL ANATOMY

Autopsies are made at the Roosevelt, New York, Bellevue, and City Hospitals during the session before the students, and usually at regular hours. The hospital pathologists demonstrate and explain the lesions discovered. Notices of autopsies are posted upon the bulletin-board of the college.

The hours for autopsies are as follows :

ROOSEVELT HOSPITAL—2 P.M., Dr. HODENFYLL

NEW YORK HOSPITAL—2 P.M.

BELLEVUE HOSPITAL—1 P.M., Dr. ELY

CITY HOSPITAL—Thursdays and Saturdays, Dr. VAN GIESON, at hours announced upon the bulletin-board.

HOSPITAL APPOINTMENTS

By a resolution of the Commissioners of Public Charities and Correction, the faculty of this college is entitled to nominate for appointment by the commissioners, after competitive examination in the college, its proportion of members of the house staff of Bellevue Hospital; such members to be attached to that division of the said hospital which has been assigned to the care of the college.

Four nominations, two medical and two surgical, are made each year by the college from among its graduates under the above resolution.

One medical and one surgical assistant go on duty upon July 1st; in the same way one medical and one surgical assistant upon January 1st.

The choice as to character of service, and the time of beginning the same, is given to the successful candidates in the order of their merit.

The surgical nominees all serve the hospital for six months in each of the four grades of ambulance surgeon, junior assistant, senior assistant, and house surgeon; each one having thus a total of two years' experience on the "House Staff."

The medical nominees serve each in the three grades of junior assistant, senior assistant, and house physician.

Similar positions are filled twice in each year, by public competitive examinations, open to graduates of this college, in the following institutions:

The "non-collegiate" division of Bellevue Hospital; the New York Hospital; the Roosevelt Hospital; St. Luke's Hospital; the City Hospital, Blackwell's Island; St. Vincent's Hospital; St. Francis' Hospital; the German Hospital; the Mount Sinai Hospital; the Presbyterian Hospital; the Woman's Hospital; the Brooklyn Hospital; St. Catherine's Hospital, Brooklyn; St. Peter's Hospital, Brooklyn; the King's County Hospital, Flatbush, L. I.

ALONZO CLARK SCHOLARSHIP

By the will of the late Alonzo Clark, M.D., LL.D., for many years president of the College of Physicians and Surgeons, and professor of pathology and practical medicine, it has been placed in the power of the faculty to bestow a scholarship, with an income of about nine hundred dollars a year, for the purpose of promoting the discovery of new facts in medical science.

This was bestowed for a period of three years, beginning Oct. 1, 1891, upon Ira Van Gieson, M.D., of New York City.

FELLOWSHIPS OF THE ALUMNI ASSOCIATION

In June, 1891, the Trustees, at the request of the Alumni Association of the College of Physicians and Surgeons, established three fellowships to be known as the Fellowships of the Alumni Association of the College of Physicians and Surgeons, the provision for which is made annually by the Association.

These fellowships are open to graduates of the College of Physicians and Surgeons who have shown special aptitude for scientific research in the depart-

ments of anatomy, physiology, or pathology. They are held for a period of two years and have an annual value of five hundred dollars each. The appointments to these fellowships are made by the executive committee of the Alumni Association from candidates presented to them by the professor of anatomy, the professor of physiology, and the professor of pathology.

The persons appointed to these fellowships are expected to pursue scientific research in the department which they may elect, in this country, either in the schools of Columbia College, where they enjoy free tuition and the privileges of the laboratories, or in other institutions at their own expense. At the end of two years the holders of these fellowships are expected to present to the Association theses containing evidence of independent or original work in their special departments. The next appointments to these fellowships will be made in May, 1894.

The names of the successful candidates for these fellowships will be announced at the commencement following their appointment, and will be published in the annual catalogue.

The fellowships have been held during 1892-93 and 1893-94 by :

F. J. Brockway, M.D.
Alexander Lambert, M.D.
William H. Park, M.D.

PRIZES

(All prizes are publicly awarded at the College Commencement.)

Harsen Prizes for Clinical Reports

Founded in 1859, by the late Jacob Harsen, M.D., a graduate of the College of Physicians and Surgeons.

Three annual prizes are offered for the three best reports, in writing, by students of the College of Physicians and Surgeons, of the clinical instruction given at the New York Hospital during any four consecutive months of the year which ends on commencement day.

These reports must embrace the clinical teaching of both the visiting physician and the visiting surgeon on duty.

The prizes are as follows :

A First Prize of one hundred and fifty dollars ; a Second Prize of seventy-five dollars ; a Third Prize of twenty-five dollars.

A "Harsen Prize Medal" and a diploma are given with each prize.

Harsen Prizes for Proficiency at Examination

In consequence of the great increase in value of the Harsen Prize Fund, in addition to the three prizes above mentioned, there are awarded three Harsen prizes for proficiency at examination, viz :

A First Prize of five hundred dollars ; a Second Prize of three hundred dollars ; a Third Prize of two hundred dollars.

The award of these prizes is made as follows :

The ten members of each graduating class who, at their examination for the degree of Doctor of Medicine, have shown the highest proficiency in all the branches combined, receive each a diploma of "Examination Honors," and are entitled to take part in special competitive examinations, the three most meritorious competitors at which receive the first, second, and third prizes, respectively.

The competitive examinations consist :

I—Of an examination in writing, covering *all the branches* of medical teaching.

II—Of an examination upon the cadaver in *practical anatomy*, conducted by the professor of anatomy.

III—Of practical examinations in *clinical medicine* and *clinical surgery*, conducted at the hospitals by the professors of medicine and surgery respectively.

The relative merits of the competitors are decided, and the award of the prizes made, by a committee of three judges, consisting of the president of the College of Physicians and Surgeons, the president of the Association of the Alumni, and a resident alumnus selected by them.

Alumni Association Prize

This is a biennial prize of *five hundred dollars* open for competition to the alumni of the College of Physicians and Surgeons. It is awarded for the best medical essay submitted upon any subject the writer may select, and is open to competition in alternate years with the Cartwright prize.

If no one of the competing essays be deemed sufficiently meritorious, the prize is not awarded.

An essay, in order to be held worthy of the prize, must contain the results of original investigations made by the writer.

This prize is not awarded to any essay which is the work of more than one author, or which is at the same time submitted for another prize.

Each competitor is required to send with his essay to the Prize Committee a statement that these requirements have been complied with.

Essays in competition for the prize to be awarded at commencement, 1896, must be sent to the secretary of the Alumni Association on or before April 1, 1896.

Competing essays must each be marked with a device or motto, and accompanied by a sealed envelope, similarly marked, containing the name and address of the author.

Cartwright Prize of the Alumni Association

The prize consists of *five hundred dollars*, and is offered for competition in alternate years with the Alumni Association prize.

It is awarded on the same terms as the latter, *except that it is open to universal competition.*

Essays in competition for the prize to be awarded at commencement, 1895, must be sent to the secretary of the Alumni Association on or before April 1, 1895.

Stevens Triennial Prize

Established by the late Alexander Hodgdon Stevens, M.D., formerly president of the College of Physicians and Surgeons, on the following plan :

The prize, awarded triennially, consists of the interest yielded by the principal fund during three years, and amounts to *two hundred dollars*.

The administration of the prize is entrusted to a commission, consisting of the president of the College of Physicians and Surgeons (*ex-officio*), the president of the Alumni Association (*ex-officio*), and the professor of physiology (*ex-officio*) in the same institution.

The prize is awarded to no essay unless it is sufficiently meritorious and includes the results of original research by the writer upon the subject chosen.

In 1897 this prize will be given to the *best medical essay* submitted, upon any subject the writer may select.

The competing essays must be sent in to the president of the College of Physicians and Surgeons, New York, on or before the first day of January, 1897. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope, bearing the same device or motto, and containing the name and address of the author. The envelope belonging to the successful essay will be opened, and the name of the author announced, at the annual commencement of the college in 1897 ; at which time, also, the subjects for the next triennial prize (1900) will be announced.

This prize is open for universal competition.

Joseph Mather Smith Prize

The fund for this prize was given by the relatives, friends, and pupils of the late Dr. Smith, as a memorial of his services as professor in the College of Physicians and Surgeons from 1826 to 1866. Under the provisions of the trust, an annual prize of *one hundred dollars* is awarded for the best essay (if sufficiently meritorious) on the subject of the year, presented by an alumnus of this college. The prize committee, consisting of the president of the College of Physicians and Surgeons, the professor of the practice of medicine, and the president of the Alumni Association, designate each year the subject for the following year. The competing essays should be sent to the president of the college on or before March 10th, each essay signed with a device or motto, and accompanied by a sealed envelope, inscribed with the same device or motto, and containing the name of the author. The envelope of the successful essayist will be opened, and the prize awarded, at the annual commencement next following.

An essay in competition for the prize to be awarded in 1895 may be upon any subject relating to hygiene, pathology, or practical medicine.

EXPENSES

All Fees are Payable in Advance

The necessary expenses for graduation in medicine, for a student who attends the four-years' curriculum, are as follows :

First Year

Matriculation	\$ 5
Fees for all the required exercises of the year	200
Anatomical material, \$1 each part.	

Second Year

Fee for all the required exercises of the year	\$200
Anatomical material, \$1 each part.	

Third Year

Fee for all the required exercises of the year	\$200
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Fourth Year

Fee for all the required exercises of the year, including electives	\$200
Examination fee	25

Fees for Special Students, 1894-95

Didactic lectures from each of the seven chairs of (1) Anatomy, (2) Materia Medica and Therapeutics, (3) Obstetrics and Gynecology, (4) Physics and Chemistry, (5) Physiology, (6) Practice of Medicine and Neurology, (7) Surgery	\$20
Dissection	10
Dissecting material, per part	1
Practical chemistry, including chemicals and breakage, per course	25
Practical toxicology, per course	15
Laboratory course in normal histology, including materials	25
Laboratory course in pathology and pathological histology, including materials	25
Laboratory fee for special instruction in pathology or histology or bacteriology, per month	25
Operative surgery on the cadaver, including material, per course	20

For other special courses the fees must be specially arranged for with the instructors.

The clinical lectures at the VANDERBILT CLINIC are free to matriculates who do not take the regular curriculum.

The public clinical lectures, and demonstrations of pathological anatomy, which are given at the hospitals by officers of the college, are free to matriculates.

BOARD

Information in regard to board can be obtained from the secretary of the Students' Movement, through the Registrar, Mr. E. T. Boag, at his office in the college. Prices range from \$5 to \$9 per week.

CORRESPONDENCE

Letters requesting information should be addressed to George M. Tuttle, M.D., Secretary of the Faculty, 437 West Fifty-ninth Street, New York.

ADMISSION

1. Applicants for matriculation who declare themselves in writing not to be candidates for the degree of Doctor of Medicine from this college are admitted, without further formality, to matriculation as special students. Such applicants cannot subsequently become candidates for graduation at this college without full compliance with the terms of admission and graduation as set forth in this catalogue.

2. To all persons who matriculate with the intention of becoming candidates for the degree of doctor of medicine *at any medical school in the State of New York*, the following provisions of law are now applicable, viz.:

LAWS OF NEW YORK, 1893, CHAPTER 661, § 145 (IN PART).

"The degree of bachelor or doctor of medicine shall not be conferred in this State before the candidate has filed with the institution conferring it, the certificate of the Regents that *three years before the date of the degree, or before or during his first year of medical study in this State*, he had either graduated from a registered college or satisfactorily completed not less than a three years' academic course in a registered academy or high school; or had a preliminary education considered and accepted by the Regents as fully equivalent; or had passed Regents' examinations in arithmetic, elementary English, geography, spelling, United States history, English composition, and physics. Students who had matriculated in a New York medical school before June 5, 1890, shall be exempt from this preliminary education requirement, provided the degree be conferred before August 1, 1895."

Every person to whom this law applies, must, in pursuance thereof, before he can be admitted to final examination for the degree of M.D., file with the Secretary of the Faculty a MEDICAL STUDENT'S CERTIFICATE OF THE REGENTS OF THE UNIVERSITY OF THE STATE OF NEW YORK.

The conditions to be fulfilled in order to obtain this certificate are as follows:

A—Certificates without Examination

Candidates for a medical student's certificate having credentials which can be accepted in place of an examination under the act, must send their credentials to "UNIVERSITY EXAMINATIONS DEPARTMENT, ALBANY, N. Y." They will be examined and returned at once, and, if accepted, a medical student's certificate will be sent with them. If the certificate be delayed for verification of

EXAMINATIONS IN				
TIMES	PLACES	Group 1, Language		Group 2, Mathematics
		Modern	Ancient	
1894-95				Group 3, Science
SEPTEMBER, 1894—The last Tuesday, Wednesday, and Thursday <i>i.e.</i> , 25-27	New York, Albany, Syracuse, Buffalo. For law and medical students only	Reading Writing Spelling English, elementary " advanced German, 1st year " 2d year	Latin, 1st year	Arithmetic Algebra Plane Geometry Physical Geography Physics Physiology and hygiene
NOVEMBER—Monday, Tuesday, and Wednesday of Thanksgiving week <i>i.e.</i> , 26-28	New York and about 200 academies and high schools	Reading Writing Spelling English, elementary " composition " literature	Cesar's Comment.	Arithmetic Algebra Plane geometry Physics Physical geography Physiology and hygiene
JANUARY, 1895—20th week from second Monday in September <i>i.e.</i> , 21-25	New York and about 160 academies and high schools	Reading Writing Spelling English, elementary " advanced Rhetoric English literature Course in English reading German, 1st year French, 1st year	Latin, 1st year Cesar's Comment. Cicero's Orations Virgil's <i>Æneid</i> Latin composition Greek, 1st year Xenophon's <i>Anab.</i> Homer's <i>Iliad</i> Greek composition	Geography Greek history Roman history English history United States history Civics Economics Book-keeping Drawing
MARCH—Week beginning second Monday <i>i.e.</i> , 11-15	New York and about 160 academies and high schools	January and March		Arithmetic " advanced Algebra Plane geometry Solid geometry Plane trigonometry Astronomy Physics Chemistry Geology Physical Geography Botany Zoölogy Physiology and hygiene
JUNE—40th week from second Monday in September <i>i.e.</i> , 10-14	New York and about 375 academies and high schools	Same as in January and March, and American literature Reading courses, 1-6 German, 2d year " 3d year French, 2d year " 3d year		Algebra, advanced Physics, advanced Chemistry, advanced General history New York history Psychology Stenography Drawing, advanced

the candidate, when issued, it will be dated from receipt of the candidate's application, so that the candidate will lose no time.

The credentials, beside those referred to in the law, which the Regents accept in place of an examination under the act, may be ascertained by written application addressed to "UNIVERSITY EXAMINATIONS DEPARTMENT, ALBANY, N. Y."

B—Examinations under the Act

Candidates should notify the Regents' office at Albany, at least ten days in advance, stating at what time and in what studies they must be examined. They will at once be assigned the most convenient time and place.

Any person who does not obtain a medical student's certificate without examination, according to section A, must pass the examinations named in the law, or their equivalents, as allowed by the Regents, and referred to under section A.

The times, places, and subjects of these examinations are set forth on page 41. *On the dates specified, examinations will be held entirely under the charge of the Regents.*

GRADUATION

(See also "License to Practise Medicine," page 43.)

Every candidate in the four-years' course will be required, before admission to the degree of M.D. :

1. To present satisfactory evidence, as required by law, of good moral character, and of having attained the age of twenty-one years.

2. To present a "Medical Student's Certificate of the Regents of the University of the State of New York," as the evidence of preliminary education required by law (see page 40).

3. To have attained to satisfactory standing in the required studies of the four years of the curriculum, including the elective course or courses chosen for the fourth year.

4. A candidate who shall have been admitted to advanced standing will be required to have spent not less than four academic years at the studies referred to in the clause next preceding; and to have complied successfully with the requirements for admission to advanced standing set forth on page 14.

No two academic years which shall have begun during the same calendar year will be held to satisfy the requirements of the present clause.

The Degree of Master of Arts

The degree of Master of Arts may be conferred upon students holding college degrees, who shall have completed with distinction the entire course of the School of Medicine, provided that in each case the candidate present a satisfactory dissertation, and that at least a part of the extra work required of him for the degree of Master of Arts be taken under the direction of either the Faculty of Philosophy or the Faculty of Political Science, to the extent of one minor course, for not less than one year.

LICENSE TO PRACTISE MEDICINE

The following extracts from the act regulating the practice of medicine in the state of New York are printed for the information of such graduates and students as may intend to practise medicine in this state :

Laws of New York, 1893, ch. 661

Previous laws relating to the practice of medicine were repealed May 9, 1893, when this new law took effect.

* * * * *

§ 141 STATE BOARDS OF MEDICAL EXAMINERS—There shall continue to be three separate state boards of medical examiners of seven members each, each of whom shall hold office for three years from August 1 of the year in which appointed. One board shall represent the Medical Society of the State of New York, one the Homœopathic Medical Society of the State of New York, and one the Eclectic Medical Society of the State of New York. Each of these three societies shall at each annual meeting nominate twice the number of examiners to be appointed in that year on the board representing it. The names of such nominees shall be annually transmitted under seal by the president and secretary prior to May 1 to the regents, who shall, prior to August 1, appoint from such lists the examiners required to fill any vacancies that will occur from expiration of term on August 1.

§ 145 ADMISSION TO EXAMINATION—The regents shall admit to examination any candidate who pays a fee of \$25.00 and submits satisfactory evidence, verified by oath if required, that he :

(1) Is more than twenty-one years of age ; (2) is of good moral character ; (3) has the general education required in all cases after August 1, 1895, preliminary to receiving the degree of bachelor or doctor of medicine in this state¹ ; (4) has studied medicine not less than three full years, including three satisfactory courses, in three different academic years, in a medical school registered as maintaining at the time a satisfactory standard ; (5) has either received the degree of bachelor or doctor of medicine from some registered medical school, or a diploma or license conferring full right to practise medicine in some foreign country.

* * * * *

The regents may in their discretion accept as the equivalent for any part of the third or fourth requirement, evidence of five or more years' reputable practice of medicine, provided that such substitution be specified in the license.

§ 146 QUESTIONS—Each board shall submit to the regents, as required, lists of suitable questions for thorough examination in anatomy, physiology, and hygiene, chemistry, surgery, obstetrics, pathology, and diagnosis, and thera-

¹ See ADMISSION, page 40.

peutics including practice and *materia medica*. From these lists the regents shall prepare question papers for all these subjects, which at any examination shall be the same for all candidates, except that in therapeutics, practice, and *materia medica* all the questions submitted to any candidate shall be chosen from those prepared by the board selected by that candidate, and shall be in harmony with the tenets of that school as determined by its state board of medical examiners.

§ 147 EXAMINATIONS AND REPORTS—Examinations for license shall be given in at least four different places in this state and at least four times annually, in accordance with the regents' rules, and shall be exclusively in writing and in English. Each examination shall be conducted by a regents' examiner, who shall not be one of the medical examiners. At the close of each examination the regents' examiner in charge shall deliver the questions and answer papers to the board selected by each candidate, or to its duly authorized committee, and such board, without unnecessary delay, shall examine and mark the answers and transmit to the regents an official report, signed by its president and secretary, stating the standing of each candidate in each branch, his general average, and whether the board recommends that a license be granted. Such report shall include the questions and answers and shall be filed in the public records of the University. If a candidate fails on first examination, he may, after not less than six months' further study, have a second examination without fee.

If the failure is from illness or other cause satisfactory to the regents, they may waive the required six months' study.

§ 148 LICENSES—On receiving from a state board an official report that an applicant has successfully passed the examinations and is recommended for license, the regents shall issue to him, if in their judgment he is duly qualified therefor, a license to practise medicine. Every license shall be issued by the University under seal, and shall be signed by each acting medical examiner of the board selected, and by the officer of the University who approved the credential which admitted the candidate to examination, and shall state that the licensee has given satisfactory evidence of fitness as to age, character, preliminary and medical education, and all other matters required by law, and that after full examination he has been found properly qualified to practise. Applicants examined and licensed by other state examining boards registered by the regents as maintaining standards not lower than those provided by this article, and applicants who matriculated in a New York state medical school before June 5, 1890, and who received the degree of M.D. from a registered medical school before August 1, 1895, may, without further examination, on payment of \$10 to the regents and on submitting such evidence as they may require, receive from them an indorsement of their licenses or diplomas conferring all rights and privileges of a regents' license issued after examination.

* * * * *

§ 149 REGISTRY—Every license to practise medicine shall, before the licensee begins practice thereunder, be registered in a book kept in the clerk's office

of the county where such practice is to be carried on, with name, residence, place and date of birth, and source, number, and date of his license to practise. Before registering each licensee shall file, to be kept in a bound volume in the county clerk's office, an affidavit to the above facts, and also that he is the person named in such license, and had, before receiving the same, complied with all requisites as to attendance, terms, and amount of study and examinations required by law and the rules of the University as preliminary to the conferment thereof ; that no money was paid for such license, except the regular fees paid by all applicants therefor ; that no fraud, misrepresentations, or mistake in any material regard was employed by any one or occurred in order that such license should be conferred. Every license, or if lost, a copy thereof legally certified so as to be admissible as evidence, or a duly attested transcript of the record of its conferment shall, before registering, be exhibited to the county clerk, who only in case it was issued or indorsed as a license under seal by the regents shall indorse or stamp on it the date and his name preceded by the words : " Registered as authority to practise medicine, in the clerk's office of . . . county." The clerk shall thereupon give to every physician so registered a transcript of the entries in the register with a certificate under seal that he has filed the prescribed affidavit. The licensee shall pay to the county clerk a total fee of one dollar for registration, affidavit, and certificate.

* * * * *

ACADEMIC CALENDAR

- 1894—June 13—Commencement, Wednesday.
Sept. 1—Matriculation and registration begin, Saturday.
Oct. 1—Instruction begins, Monday.
Oct. 8—Registration in the four-years' course closes, Monday.
Nov. 6—Election day, holiday.
Nov. 29—Thanksgiving day, holiday.
Dec. 24—Christmas holidays begin Monday.
- 1895—Jan. 5—Christmas holidays end, Saturday.
Feb. 22—Washington's birthday, Friday, holiday.
Feb. 27—Ash-Wednesday, holiday.
April 12—Good Friday, holiday.
May 30—Memorial Day, Thursday, holiday.
June 12—Commencement, Wednesday.
Sept. 2—Matriculation and registration begin, Monday.
Oct. 7—Instruction begins, Monday.



Columbia College
in the City of New York

COURSE

IN THE

COLLEGE OF PHYSICIANS AND
SURGEONS

LEADING TO THE DEGREE

OF

DOCTOR OF MEDICINE

ANNOUNCEMENT

FOR

1895-1896

NOTE

COLUMBIA COLLEGE offers in addition to the course detailed in this pamphlet :

In the SCHOOL OF ARTS :

A four-years' course leading to the degree of A.B.

In the SCHOOL OF LAW :

A three-years' course leading to the degree of LL.B.

In the SCHOOL OF MINES :

A four-years' course in Mining Engineering leading to the degree of			E.M.
“	“	Civil Engineering	“ C.E.
“	“	Electrical Engineering	“ E.E.
“	“	Metallurgy	“ Met.E.
“	“	Geology and Palæontology	“ B.S.
“	“	Analytical and Applied Chemistry	“ B.S.
“	“	Architecture	“ B.S.

A two-years' post-graduate course in Sanitary Engineering leading to the degree of S.E.

Also many courses in the various University Faculties, especially the Faculties of Political Science, Philosophy, and Pure Science, leading to the University degrees of A.M. and Ph.D. A combination of courses under the Faculties of Law and Political Science leads to the degree of LL.M.

The first-year courses of the School of Law, the College of Physicians and Surgeons, and the School of Mines are open, as electives, to Seniors in the School of Arts. Consequently, such Seniors as may desire to do so can prepare themselves for advanced standing in these schools by electing these first-year courses and counting them for the degree of A.B.

Information as to any of the above courses may be had by addressing the Secretary of the President, Columbia College.

All the schools and departments of Columbia College are at Madison Avenue and 49th Street, with the exception of the Department of Biology and the Medical School, which are at Tenth Avenue and 59th Street.

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UNIVERSITY FACULTY OF MEDICINE

SETH LOW, LL.D., *President.*

NAMES	ADDRESSES
JAMES W. McLANE, M.D.....	51 West 38th Street
Dean of the Faculty, <i>ex-officio</i> Delegate to the University Council	
Professor of Obstetrics	
THOMAS M. MARKOE, M.D.....	20 West 30th Street
Emeritus Professor of Surgery	
T. GAILLARD THOMAS, M.D.....	600 Madison Avenue
Emeritus Professor of Obstetrics and Gynecology	
JOHN T. METCALFE, M.D.....	149 West 57th Street
Emeritus Professor of Clinical Medicine	
CHARLES F. CHANDLER, PH.D.....	51 East 54th Street
Professor of Chemistry and Medical Jurisprudence	
EDWARD CURTIS, M.D.....	120 Broadway
Emeritus Professor of Materia Medica and Therapeutics	
FRANCIS DELAFIELD, M.D., LL.D.....	12 West 32d Street
Professor of the Practice of Medicine	
JOHN G. CURTIS, M.D.....	327 West 58th Street
Professor of Physiology, Delegate to the University Council	
GEORGE M. TUTTLE, M.D.....	49 West 38th Street
Professor of Gynecology	
Secretary of the Faculty	
GEORGE L. PEABODY, M.D.....	57 West 38th Street
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WILLIAM T. BULL, M.D.....	35 West 35th Street
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M. ALLEN STARR, M.D., Ph.D.....	22 West 48th Street
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GEORGE S. HUNTINGTON, M.D.....	50 East 73d Street
Professor of Anatomy	

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T. MITCHELL PRUDDEN, M.D.	160 West 59th Street
Professor of Pathology	
Director of the Laboratories of Histology, Pathology, and Bacteriology	

OTHER OFFICERS

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Professor of Clinical Medicine	
ABRAHAM JACOBI, M.D.	110 West 34th Street
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EUGENE HODENPYL, M.D.....	437 West 59th Street Instructor in Pathology
EDWARD LEAMING, M.D.....	437 West 59th Street Instructor in Photography
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(Including Diseases of the Larynx, Pharynx, and Nose.)

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F. BIERHOFF, M.D.

Department of Venereal Diseases

CHIEF OF CLINIC

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EDMOND Y. HILL, M.D.

WILLIAM C. GILLEY, M.D.

JOHN VAN DER POEL, M.D.

JOHN B. STEIN, M.D.

Officers of Administration

EDWIN B. CRAGIN, M.D.

Assistant Secretary of the Faculty

EDWARD T. BOAG

Registrar

GENERAL STATEMENT

The College of Physicians and Surgeons, on July 1, 1891, became, under the authority of the Legislature, a part of Columbia College. This merger, which makes the medical department in a complete sense an integral part of the University system, largely increases the usefulness of the Medical School, favors the thoroughness of scientific medical education, and promotes scientific research. The accessions to the teaching force, notably in the Department of Anatomy and in the physiological, pathological, bacteriological, and chemical laboratories, permit the realization, to a degree previously quite impossible, of the great opportunities for instruction and research afforded by the excellence of the dissecting rooms, the laboratories, and apparatus.

The college occupies a group of buildings, given by the late William H. Vanderbilt and members of his family, and by William D. Sloane, Esq., which stand upon thirty contiguous lots of land, bounded on the south, west, and north by Fifty-ninth Street, Tenth Avenue, and Sixtieth Street, respectively, and lying immediately opposite to the Roosevelt Hospital.

The station, which is a few steps from the college, at the corner of Fifty-ninth Street and Ninth Avenue, is the point of union of the Ninth Avenue and Sixth Avenue Elevated Railroads, by either of which the buildings are immediately accessible from the north and south.

The "across-town" surface-cars of the Belt-line Surface Railway move east and West along Fifty-ninth Street, pass the site of the college, and place it in easy communication with the Second and Third Avenue Elevated roads, and with the numerous lines of surface-cars which reach Fifty-ninth Street from the north and south. All important points in the city, including the various hospitals, can thus readily be reached from the college without a walk of any length.

The buildings appertaining to the college are three in number :

THE COLLEGE BUILDING PROPER ;
THE VANDERBILT CLINIC ;
THE SLOANE MATERNITY HOSPITAL.

THE COLLEGE BUILDING PROPER has been designed to facilitate that combination of didactic instruction with laboratory work which is essential to a modern scientific training. It consists of a *southern portion*, measuring 140 feet by 43 feet, extending along Fifty-ninth Street ; of a *northern portion*, 96

feet by 43 feet, extending along Sixtieth Street; and of a *middle portion*, 96 feet by 55 feet, connecting the other two. The total area covered is therefore 15,428 square feet. Each story above the basement of the northern and southern portions has been built "in the clear," and contains neither brick partitions nor iron columns. It is therefore possible to remodel the interior at any future time.

Through the recent generous gift of Messrs. Cornelius, William K., Frederick W., and George W. Vanderbilt, there has been rendered possible an important enlargement of the college building proper, to provide additional facilities for anatomical teaching and for practical work in Pathology and Bacteriology.

The present south wing of the college will be extended on Fifty-ninth Street eastward for 55 feet, the depth of the new wing being 80 feet. This new building will be four stories high and will be devoted to the Department of Anatomy. The basement will contain the cast and modelling rooms, the corrosion-room, and the reference osteological collection. The first and second stories will be occupied by the Museum of Human and Comparative Morphology, the first floor being provided with a gallery, greatly increasing the available floor space.

The Morphological Research Laboratory, at present situated in the north wing of the college building, will be transferred to the third story of the new anatomical building, affording ample accommodations for the researches of the officers of the department and for post-graduate students.

The fourth floor will form an extension to the present dissecting room. When completed the new classroom for practical anatomy will accommodate over four hundred students, and by means of the artificial cooling plant work can be carried on without regard to the outside temperature.

The north end of the fourth floor will be occupied by a small auditorium for anatomical demonstrations. It will have overhead light and an arrangement of seats carefully planned, so as to bring each member of the sections close to the object of the demonstration.

The two upper floors of the new building over the Vanderbilt Clinic extension will be made continuous with the space now occupied by the Department of Pathology, and will be devoted to the present work of this department in Pathology and Bacteriology, and to such an extension of these as the plans of the new four-years' course require. There will be on the upper fifth floor a large laboratory for the new undergraduate courses in Bacteriology of the second year, and a series of larger and smaller rooms for advanced students and research work in this theme. On the fourth floor there will be a large laboratory for special advanced students in Pathology and for research, a series of private rooms for the instructors, and a library.

Vanderbilt Clinic

The new VANDERBILT CLINIC extends from the corner of Sixtieth Street and Tenth Avenue to the north wing of the college building, covering an area 180 by 60 feet, and is three stories in height. It is twice the size of the original building.

This institution was built and endowed by the sons of the late William H. Vanderbilt as a memorial of their father. It supplies a fully equipped dispensary service for the sick poor. It also affords ample material for extended practical clinical instruction in the various departments of medicine and surgery, as the professors, with their clinical assistants, have the entire charge of its practice.

During the year 1893, 129,444 patients were treated in the dispensary, of whom 39,569 were new patients. During the year 1894, 136,859 patients were treated, of whom 41,871 were new.

The original building having proved inadequate to accommodate these large numbers, the sons of Mr. Vanderbilt have recently (1895) united in an additional gift of \$350,000, enabling the size of the building to be doubled. In the enlarged building, which will be opened in October, 1895, ample space will be provided not only for the reception of the constantly increasing number of patients, but also for the instruction of the students in small classes in each of the ten different departments. Two large dark rooms with twenty stalls are provided for the instruction in the use of the ophthalmoscope and laryngoscope. Each department has a room for the practical instruction of small groups of students, in addition to the rooms devoted to the treatment of patients. There is a large theatre for the clinical lectures, accommodating about four hundred students, and a smaller lecture hall where one hundred can be seated.

All modern appliances for the treatment of diseases have been introduced, so that students can learn thoroughly the use of all methods in each department, and thus can acquire a practical knowledge of all the "specialties" in medicine.

Sloane Maternity Hospital

THE SLOANE MATERNITY HOSPITAL is upon the college land at the corner of Fifty-ninth Street and Tenth Ave.

This is a lying-in hospital given by William D. Sloane, Esq., whose wife a daughter of the late William H. Vanderbilt, has endowed the institution by making all of its beds free in perpetuity.

The obstetric service here is under the exclusive direction of the Professor of Midwifery at the college, the Instructor in obstetrics being the Resident Physician.

For further details and for the practical instruction at this hospital, see "Obstetrics," page 25.

Through the further munificence of Mr. Sloane the present hospital is to be greatly enlarged. The new building will be erected upon Fifth-ninth Street, east of the present building and continuous with it. It will be six stories high, but will conform to the old building in general architectural style. This will furnish seventy-two additional beds for patients and offer greater accommodations for the House Staff and for the nurses. In the new hospital there will be an operating room which will accommodate about fifty students. Mrs. Sloane has agreed to provide for the increased cost of maintenance of the hospital during her life, and at her death to make in her will suitable provision for its support.

CURRICULUM

The work required of the students at this college who are candidates for the degree of M.D. now covers four years of study according to the curriculum set forth below in outline.

This curriculum will be worked up in detail year by year, as the course progresses, the right being reserved to make amendments as experience may prove necessary.

Programmes of the exercises, giving time and place, will be distributed among the matriculates at the beginning of each annual session.

The following scheme does not affect students who have already matriculated and attended a session prior to 1894-95. Such students will complete the curriculum in force when they became students of the college.

The following statement is drawn up from the point of view of the student, and shows what is expected of each matriculate taking the regular curriculum.

In all subjects which are not completed in a single year the instruction offered to a given student will be different each year.

The regular instruction for 1895-6 will begin on Monday, October 7, 1895, at 11 A.M. Commencement will be on Wednesday, June 10, 1896.

Every student intending to pursue the four-years' course must register his name in person within the first seven working days of each session.

Each student pursuing the three years' course and intending to graduate in 1896 must register his name in person not later than October 21, 1895.

Students of the first year in the four-years' course will not be excused from attendance on the regular examinations in Physics and Chemistry, on account of work performed elsewhere.

For the calendar, 1895-6, see the last page.

FIRST YEAR

PHYSICS AND CHEMISTRY, INCLUDING MEDICAL CHEMISTRY. (See page 30.)

Lectures combined with demonstrations, 4 a week.

Conferences, 2 a week for one half the year.

* *Laboratory Work* in practical physics, 2-hour exercises once a week for one half the year.

Laboratory Work in practical medical chemistry, 2-hour exercises twice a week for one half the year.

ANATOMY, begun. (See page 19.)

Demonstrations to sections, 4 a week for each student.

Laboratory Work in dissection, 18 to 20 hours a week, for from 3 to 5 periods of 4 weeks each.

NORMAL HISTOLOGY, begun. (See page 28.)

Laboratory Work, 2-hour exercises 3 times a week for one half the year.

PHYSIOLOGY, begun. (See page 33.)

Lectures combined with demonstrations, 3 a week.

Demonstrations to sections from 1 to 3 a week for each student

EXAMINATIONS upon the work of the first year.

* At the Columbia College Physical Laboratory, 49th Street and Madison Avenue.

SECOND YEAR

ANATOMY, finished.

Lectures combined with demonstrations, 3 a week.

Demonstrations to sections, 4 a week for each student for one half the year ;
5 a week for each student for one half the year.

Laboratory Work in dissection, 10 to 12 hours a week for from 1 to 3
periods of 4 weeks each.

NORMAL HISTOLOGY, finished.

Laboratory Work, 2-hour exercises twice a week for one half the year.

PHYSIOLOGY, finished.

Lectures combined with demonstrations, 3 a week.

Demonstrations to sections from 1 to 3 a week for each student.

PATHOLOGICAL ANATOMY, begun.

Attendance at Autopsies, with practical instruction, once a week for 8
weeks.

BACTERIOLOGY.

Laboratory Work, 2-hour exercises 3 times a week for one fourth the year.

MATERIA MEDICA AND THERAPEUTICS, begun.

Lectures, 3 a week.

TOXICOLOGY.

Laboratory Work, 2-hour exercises once a week for one half the year.

Conferences, once a week for one half the year.

OBSTETRICS AND GYNECOLOGY, begun.

Recitations combined with demonstrations to sections, 1 a week for each
student.

EXAMINATIONS upon the work of the second year.

THIRD YEAR

MATERIA MEDICA AND THERAPEUTICS, finished.

Lectures, 3 a week.

PATHOLOGICAL ANATOMY, finished.

Demonstrations to sections, 2 a week for each student.

PATHOLOGICAL HISTOLOGY.

Laboratory Work, 2-hour exercises 3 times a week for one half the year.

THE PRACTICE OF MEDICINE, INCLUDING THE DISEASES OF THE MIND AND
NERVOUS SYSTEM, begun.

Lectures, 3 a week.

Clinical Lectures at the Vanderbilt Clinic, once a week.

Clinical Lectures or instruction in the wards at the Roosevelt Hospital, once
a week ; at the New York Hospital once a week for one half the year, twice a
week for one half the year.

Practical Clinical Instruction to sections in physical diagnosis, for each student twice a week for 16 weeks.

Practical Clinical Instruction to sections in general diagnosis, for each student twice a week for 8 weeks.

THE PRINCIPLES AND PRACTICE OF SURGERY, begun.

Lectures, 3 a week.

Clinical Lectures at the Vanderbilt Clinic, once a week.

Clinical Lectures and the witnessing of operations at the New York or Roosevelt Hospital, once a week; at the New York Hospital (in addition to the above), once a week for one half the year; at the Presbyterian Hospital, once a week for one half the year.

Practical Clinical Instruction to sections, for each student twice a week for 16 weeks.

Optional—Clinical Lectures and the witnessing of operations at St. Luke's Hospital.

OBSTETRICS AND GYNECOLOGY, continued.

Lectures, 3 a week.

Clinical Lectures in Gynecology at the Vanderbilt Clinic, 1 a week.

Clinical Lectures and the witnessing of operations in Gynecology at the Roosevelt Hospital, by sections, 6 exercises for each student.

Practical Clinical Instruction to sections in Gynecology, 6 exercises for each student.

VENEREAL DISEASES.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Clinical Lectures at Bellevue Hospital 1 a week for one half the year.

Practical Clinical Instruction to sections, 12 exercises for each student.

Optional—Clinics at the City Hospital, Blackwell's Island, 1 a week for three months.

DISEASES OF THE EYE.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 exercises for each student.

DISEASES OF THE EAR.

Practical Clinical Instruction to sections, 6 exercises for each student.

EXAMINATIONS upon the work of the third year.

FOURTH YEAR

THE PRACTICE OF MEDICINE, INCLUDING THE DISEASES OF THE MIND AND NERVOUS SYSTEM, finished.

Lectures, 3 a week.

Clinical Lectures at the Vanderbilt Clinic, 2 a week.

Clinical Lectures or Instruction in the wards, at the Roosevelt Hospital once a week; at the New York Hospital once a week for four months.

Practical Clinical Instruction to sections in the wards of the Roosevelt or Bellevue Hospital, for each student 2-hour exercises 3 times a week for 8 weeks.

Practical Clinical Instruction to sections in the diagnosis of diseases of the nervous system, 6 exercises for each student.

Optional—Clinical Instruction in Bellevue and Presbyterian Hospitals, once a week.

CLINICAL MICROSCOPY.

Laboratory Work, 2-hour exercises twice a week for 8 weeks.

THE PRINCIPLES AND PRACTICE OF SURGERY, finished.

Lectures, 3 a week.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Clinical Lectures and the witnessing of operations at the New York or Roosevelt Hospital, once a week for one half the year; at Bellevue Hospital, once a week for one half the year; at the Presbyterian Hospital, once a week for one half the year.

Surgical Demonstrations at the Roosevelt Hospital, once a week for one half the year.

Practical Clinical Instruction to sections in the wards of Bellevue Hospital, for each student 2-hour exercises twice a week for 8 weeks.

Operative Surgery on the Cadaver for sections, 12 lessons; required or elective as may hereafter be determined.

Optional—Clinical Lectures and the witnessing of operations at the New York Hospital (additional to the above); at St. Luke's Hospital.

ORTHOPÆDIC SURGERY.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 exercises for each student.

OBSTETRICS AND GYNECOLOGY, finished.

Attendance upon Confinements at the Sloane Maternity Hospital.

Practical Clinical Instruction in obstetrics to sections, at the Sloane Maternity Hospital, for each student, daily for 1 week.

Clinical Lectures in gynecology at the Vanderbilt Clinic, 1 a week.

DISEASES OF CHILDREN.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 lessons for each student.

DISEASES OF THE SKIN.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 lessons for each student.

DISEASES OF THE THROAT AND NOSE.

Clinical Lectures at the Vanderbilt Clinic, 1 a week.

Practical Clinical Instruction to sections, 12 lessons for each student.

EXAMINATIONS upon the work of the fourth year, *including an elective course or courses; see next page.*

Elective Courses

Each student of the fourth year will be required, within such time as shall be prescribed after the beginning of the academic year, to elect from a list of elective courses either one course or more, as shall be determined hereafter ; such election to be final.

The course or courses thus elected, the student will be required to attend, and he will be required also to be examined thereon as a prerequisite for the degree of M.D.

The elective courses will be numerous, and in various departments, both clinical and otherwise ; and the choice will not be confined to departments represented in the Faculty of Medicine, but will be extended to allied subjects.

In view of the wide range of choice thus to be provided for, no student will be admitted to any elective course unless his attainments shall be judged adequate by the head of the department in which the course is offered.

Elective courses will be organized, if possible, in the following themes or their subdivisions, and in such others as may be approved hereafter :

- Surgical Diagnosis ;
- Obstetrics ;
- Diagnosis of Nervous Diseases ;
- Localization of Nervous Diseases ;
- Insanity (clinical course) ;
- Ophthalmology ;
- Venereal Diseases ;
- Therapeutics of Diseases of the Skin ;
- Contagious Diseases ;
- Microscopic Technology ;
- Pathological Anatomy and Histology of the Organs of Generation ;
- Pathological Anatomy and Histology of the Nervous System ;
- Cellular Biology ;
- Comparative Embryology ;
- Human and Comparative Morphology ;
- General Physiology ;
- Neuro-Muscular Physiology ;
- Physiological Technique ;
- Physiological and Experimental Psychology ;
- Philosophy ;
- Botany ;
- Chemistry ;
- Physics.

Examinations and Standing

Each student will be examined, each year, upon the work of that year.

A second examination, for candidates found deficient at the close of the first and second year's work, will be held during the week before the opening of the following session.

No student will be permitted to advance with his class from the first to the

second year, unless his standing shall have been found satisfactory, before the beginning of the work of the second year, in three out of the four departments of (1) Physics and Chemistry ; (2) Anatomy ; (3) Normal Histology ; (4) Physiology.

A student found deficient in one only of the four departments of the first year, may be permitted to advance with his class, on condition that he make good his first year's standing, in the department in which he shall have failed, before being admitted to any of the examinations upon the studies of the second year held at the end thereof.

The standing of a student for the first year will be determined as follows :

1. *Physiology*, by an examination in writing upon the lectures and demonstrations of the year.

2. *Anatomy*, by (a) a record of the student's practical work during the year ; (b) a practical examination ; (c) a brief examination in writing.

3. *Normal Histology*, as for Anatomy.

4. *Physics and Chemistry*, by (a) a record of the student's practical work during the year ; (b) a practical examination in Physics ; (c) a practical examination in Chemistry ; (d) an examination, in writing, in Physics and Chemistry.

A bad record of practical work in a department may bar a student from examination ; or a bad practical examination may bar him from an examination in writing ; the result in either case being failure in the year's work in that department.

Admission to Advanced Standing

Admission may be granted to advanced standing at the beginning of the second or of the third year, but not of the fourth year without the special consent of the Faculty.

Every applicant for advanced standing will be required (1) to present satisfactory evidence of having attended courses reasonably equivalent to those already attended by the class to which he seeks admission (see also "GRADUATION," p. 48 ; (2) to be examined for admission in all the subjects in which the said class shall have been examined already.

No one will be admitted to advanced standing in the four-years' course at the beginning of the third year before October, 1896.

A candidate for admission to advanced standing at the beginning of the second year may be so admitted either unconditionally or conditionally. In the latter case, his admission will be upon the same terms as govern students who have pursued at this college the curriculum of the first year.

During the week before the opening of the session of 1895-6 there will be held examinations upon the work done during the previous session in each department of the first year of the four-years' course, which examinations will be open both to candidates found deficient at the end of the previous session, and to candidates for admission to advanced standing at the beginning of the second year.

Each student intending to present himself for these examinations, must register his name in person at the Secretary's office, on Friday, Sept. 27, 1895, between 2 and 3 P.M.

SUBJECTS OF EXAMINATIONS FOR ADMISSION TO SECOND YEAR.

A—Physics and Chemistry

CHEMISTRY II.—Physics and General Chemistry. Elements, Atoms, molecules, and masses ; specific gravity ; hydrometers ; heat, light, magnetism, electricity. Text-book ; Ganot's or Barker's *Physics*. History, occurrence, preparation, properties, etc., of the most important elements and their compounds ; (inorganic chemistry) Fownes' or Newth's. *Written examination*.

PHYSICS IIA.—Laboratory Physics—Measurements of length with rules, verniers, and micrometers ; simple levers and forces. Determinations of weight and specific gravity of solids and liquids by several methods. Measurements of focal lengths of lenses and mirrors, three methods ; testing objectives for chromatic and spherical aberration. Finding magnifying power of telescopes, microscopes, etc. Index of refraction and spectrum analysis. Electrical measurements in current, resistance, and electromotive force, by several different methods. Methods of determining the corrections of ordinary and medical thermometers. *Experimental examination*.

CHEMISTRY XXVIII.—Physiological Chemistry—The occurrence, preparation, composition, properties, and tests for the chief constituents of plants and animals, such as the principal carbohydrates, alcohol, etc. ; the fats, oils and soaps ; the proteids and albuminoids. The inorganic constituents of the body : bone, milk, blood, bile, and the digestive fluids. Also the analysis of natural waters, and the chemical and microscopical examination of urine, normal and pathological. Equivalent to what is contained in Pellew's *Manual of Chemistry, Medical and Physiological*. *Written and experimental examination*.

B—Normal Histology

Examinations will be practical and written upon Course I (see page 28).

C—Anatomy

Examinations will be practical and written upon Courses II, III, IV, and V (see pages 19 and 20).

D—Physiology

Examinations will be written upon Course II (see page 33), and will cover the following subjects :

Matter and energy ; the properties of the cell ; inorganic proximate principles ; carbohydrates ; fats ; proteids ; plant life compared with animal life ; blood ; respiration, including its relations to the nervous system ; circulation, including its relations to the nervous system ; lymph and its movement ; animal heat, and the regulation of the body temperature ; secretion and its nervous relations ; digestion and absorption and their nervous relations ; the bile ; the glycogenic function of the liver ; the urine, the significance of its ingredients, and the nervous relations of its secretion.

SCHEDULE OF EXAMINATIONS

Physics and Chemistry

In writing, on Physics and General Chemistry. Monday, September 30th, 1895, at 2 P.M.

Practical, and in writing, Physiological and Medical Chemistry. Tuesday, October 1st, 1895, at 10 A.M.

Practical, in experimental Physics. Saturday, October 5th, 1895, at 10 A.M.

N.B. This last examination will be held at the Physical Laboratory of Columbia College, corner of East 49th Street and Madison Avenue.

Normal Histology

Practical and in writing. Wednesday, October 2d, 1895, at 2 P.M.

Anatomy

In writing. Thursday, October 3d, 1895, at 10 A.M.

Practical. The same day at 2 P.M.

Physiology

In writing :—Friday, October 4th, 1895, at 2 P.M.

STANDING AT THE END OF THE SECOND YEAR

The standing, in the respective departments, of a student at the end of his second year will be based upon the following tests, to be applied by, or under the direction of, the Professor in charge of the department unless otherwise expressly specified :

Anatomy.

- (1) A record of practical work during the year.
- (2) A practical examination in Anatomy.
- (3) A written examination, of a length to be determined by the Professor, and to be judged directly by him.

Normal Histology.

- (1) A record of practical work during the year.
- (2) A practical examination in Normal Histology.
- (3) A brief written examination, of a length to be determined by the Professor of Pathology.

Physiology.

A written examination, of a length to be determined by the Professor, and to be judged directly by him, upon the subjects covered by the lectures and demonstrations of the year.

Materia Medica and Therapeutics.

A written examination, of a length to be determined by the Professor, and to be judged directly by him, upon the subjects covered by the instruction of the year.

Toxicology.

- (1) A record of practical work during the year.
- (2) A practical examination in toxicology.
- (3) A brief written examination, of a length to be determined by the Professor of Chemistry.

Bacteriology.

- (1) A record of practical work during the year.
- (2) A practical examination in bacteriology.
- (3) A brief written examination, of a character to be determined by the Professor of Pathology.

Pathological Anatomy.

Attendance at autopsies. No tests.

Obstetrics and Gynecology.

A written examination, of a length to be determined by the Professors, upon the subjects covered by the instruction of the year.

No student will be permitted to advance with his class from the second to the third year unless, A) his standing shall have been found satisfactory, before the beginning of the work of the third year, in *five* out of the *seven* studies of 1) Physiology, 2) Materia Medica and Therapeutics, 3) Obstetrics and Gynecology, 4) Anatomy, 5) Normal Histology, 6) Bacteriology, and 7) Toxicology: and unless B) the five studies in which his standing shall have been found satisfactory, as above, include not less than three of the following four studies, viz: 1) Anatomy, 2) Normal Histology, 3) Bacteriology, and 4) Toxicology.

A student of the second year found deficient according to the terms of the above, may be permitted to advance with his class, but must make good all deficiencies before entering upon the exercises of his fourth year.

The annual examinations will be held after the close of the second year's instruction; and further examinations, for candidates found deficient, will be held during the week before the opening of the following session.

A candidate for admission to advanced standing at the beginning of the third year may be so admitted either unconditionally or conditionally. In the latter case, his admission will be upon the same terms as govern students who have pursued at this college the curriculum of the second year.

COURSES

The instruction is classified alphabetically under the following heads:

ANATOMY	OPHTHALMOLOGY
DISEASES OF CHILDREN	OTOLOGY
DERMATOLOGY	PATHOLOGY, including <i>Bacteriology</i> ,
GYNECOLOGY	<i>Normal Histology</i> , <i>Pathology</i> , and
LARYNGOLOGY, including diseases of	<i>Photography</i> .
the <i>Larynx</i> , <i>Pharynx</i> , and <i>Nose</i> .	PHYSICS AND CHEMISTRY, including
MATERIA MEDICA AND THERAPEU-	<i>Toxicology</i> .
TICS	PHYSIOLOGY
NEUROLOGY, including diseases of	PRACTICE OF MEDICINE
the <i>Mind</i> .	SURGERY
OBSTETRICS	VENEREAL DISEASES

See also CLINICS, p. 38.

The statements express, in each case, the instruction offered to a single student.

The Roman numerals prefixed to the several courses are the same as those employed in the Columbia College Catalogue.

ANATOMY

Courses

I—GENERAL INTRODUCTION TO VERTEBRATE MORPHOLOGY—Anatomy of the body cavities—Visceral and topographical course—Thorax and abdomen—Cranial and cerebral topography. Lectures combined with demonstrations 3 hours a week throughout the academic year. Prof. HUNTINGTON

Required, in the second year, of candidates for the degree of M.D.

II—DEMONSTRATIONS TO SECTIONS OF THE CLASS—Cranial osteology and syndesmology, myology, angiology, and peripheral nervous system of the head and neck. 1 hour a week throughout the academic year. Dr. SANDS

Required, in the first year, of candidates for the degree of M.D. Elective, in conjunction with III, IV, and V, for Seniors in the School of Arts.

III—DEMONSTRATIONS TO SECTIONS OF THE CLASS—Osteology, syndesmology, myology, peripheral nervous system, and angiology of the extremities. 2 hours a week throughout the academic year. Dr. BROCKWAY

Required, in the first year, of candidates for the degree of M.D. Elective for Seniors in the School of Arts, in conjunction with II, IV, and V.

These courses are so arranged as to maintain, with reference to the subjects treated, a direct connection with the laboratory course in dissection No. V.

IV—DEMONSTRATIONS TO SECTIONS OF THE CLASS.

(B) Preliminary visceral course—Anatomy of the viscera and body cavities. 1 hour a week throughout the academic year.

This portion of the course is designed to afford that general instruction in

the descriptive anatomy and the relations of the viscera which is indispensable for the understanding of the courses in the normal histology and physiology of the viscera. Dr. BREWER

Required, in the first year, of candidates for the degree of M.D. Elective for Seniors in the School of Arts, in conjunction with II, III, and V.

V—LABORATORY COURSE—Dissection of the human body. 18 to 20 hours a week, at various hours, for from 3 to 5 periods of 4 weeks each. Professor HUNTINGTON, Dr. GALLAUDET, and the ASSISTANT DEMONSTRATORS OF ANATOMY

Required, in the first year, of candidates for the degree of M.D. Elective for Seniors in the School of Arts, in conjunction with II, III, and IV.

VI—LABORATORY COURSE—Dissection of the human body. 10 to 12 hours a week for from 6 to 11 weeks. Professor HUNTINGTON, Dr. GALLAUDET, and the ASSISTANT DEMONSTRATORS OF ANATOMY

Required, in the second year, of candidates for the degree of M.D.

VII—DEMONSTRATIONS TO SECTIONS OF THE CLASS—Anatomy of the mouth, pharynx, and larynx—The auditory apparatus—The central nervous system. 3 hours a week throughout the academic year. Dr. GALLAUDET

Required, in the second year, of candidates for the degree of M.D.

VIII—DEMONSTRATIONS TO SECTIONS OF THE CLASS—Visceral anatomy—This course preserves an organic connection with Course I, and presents for direct examination and demonstration the preparations serving to illustrate that course. 1 hour a week for one half the academic year. 2 hours a week for one half the academic year.

Required, in the second year, of candidates for the degree of M.D.

IX—LABORATORY COURSES IN ANIMAL MORPHOLOGY—No specified number of hours a week. Professor HUNTINGTON

Optional for qualified candidates for the degree of M.D. Open as major or minor courses to candidates for the degree of A.M. or of Ph.D.

Research

X—THE LABORATORY OF ANIMAL MORPHOLOGY is open for research, under the direction of the Professor, to advanced workers. No definite number of hours a week. Professor HUNTINGTON

Fellowships

For the Fellowships, open to persons desiring to do special work under the Professor of Anatomy, see page 42.

Equipment

The recently completed erection of a plant for the production of artificial cold by the anhydrous ammonia process has enabled the department, through the means offered for the indefinite preservation of fresh subjects by the cold-storage system, greatly to increase the amount of material available for laboratory work ; and has also rendered it possible so to regulate the temperature of

the general laboratory that the work can be carried on without difficulty during the warmer months at the beginning and close of the academic year.

The laboratory for advanced morphological research, equipped with apparatus, and provided with steam power and plant, electricity, and ammonia-freezing and corrosion plants, will be transferred, at the beginning of the academic year, to the third story of the new anatomical building. Every facility for advanced and research work in morphology is here extended. The established connections of the department furnish abundant human and comparative material, both mature and embryonal. The private library of the Professor of Anatomy is at the disposal of advanced workers.

Much work has been done in the formation of a Museum of Human and Comparative Anatomy, the ultimate design of which is to present, in as complete a manner as possible, a view of the evolution of the forms of animal life, and of their natural relations, both in series of natural groups, and in the comparative and relative position of organs and systems. Even the approximate attainment of this aim will require much time and work. For the present, the energies of the department are directed toward placing in position the very abundant vertebrate material already on hand, and the collection of models and casts pertaining chiefly to human anatomy. The collection, both as regards groups and the individual preparations, is designed for the illustration of both elementary and advanced courses, and is largely used in the instruction of the medical undergraduates and in advanced study and research. The new Anatomical building will provide the opportunity for the further development of this invaluable portion of the departmental equipment. The first and second stories of the new building will be devoted to the morphological museum, and it is hoped that in the space thus provided the continued development of scientific anatomy, both for purposes of undergraduate instruction and of advanced research, will steadily proceed.

In addition to the museum collection proper the department is constantly adding to a large collection for advanced study and research.

A study-collection of human osteological preparations is so administered as to enable every student to take out the different osteological series and retain them for private study as long as required.

DISEASES OF CHILDREN

Courses

I—CLINICAL LECTURES AT THE VANDERBILT CLINIC UPON THE DISEASES OF CHILDREN—I hour a week throughout the academic year. Professor JACOBI

Required, in the third year, of candidates for the degree of M.D. in the *three-years' course*.

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF CHILDREN—10 lessons for each student. Dr. FRANCIS HUBER

Optional, in the third year, for candidates for the degree of M.D. in the *three-years' course*.

III—HOSPITAL CLINIC—Bellevue Hospital (see page 39), Tuesdays, 2.30 P.M., from April to June. Professor JACOBI

DERMATOLOGY

Courses

I—CLINICAL LECTURES AT THE VANDERBILT CLINIC UPON THE DISEASES OF THE SKIN—I hour a week throughout the academic year. Professor FOX

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE SKIN—6 lessons for each student. Dr. G. T. JACKSON

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

GYNECOLOGY

Courses

I—THE PRINCIPLES AND PRACTICE OF GYNECOLOGY—Didactic lectures; 3 hours a week from March 15th to the end of the academic year. Professor TUTTLE

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course.*

II—CLINICAL INSTRUCTION AT THE VANDERBILT CLINIC—I hour a week throughout the academic year. Fridays at 3 P.M. Professor TUTTLE

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

III—PRACTICAL INSTRUCTION IN DIAGNOSIS, TREATMENT, AND THE USE OF INSTRUMENTS, INCLUDING ELECTRO-THERAPEUTICS—6 lessons for each student, at the Vanderbilt Clinic. Dr. JARMAN

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

IV—HOSPITAL CLINICS IN OPERATIVE GYNECOLOGY

Roosevelt Hospital, McLane Operating Theatre. Professor Tuttle. Tu., Th., and Sat. at 2.30 P.M., throughout the academic year

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

The McLane Operating Theatre of the Roosevelt Hospital

(See also page 39.)

This is upon the hospital grounds immediately opposite the College of Physicians and Surgeons, and is one of the most thoroughly equipped buildings in this country for instruction in the surgery of gynecology.

The cases upon which operations are demonstrated are taken from the gynecological wards of the Roosevelt Hospital, which are under the exclusive direction of the Professor of Gynecology, and the cases in which are all available for the instruction given by him.

LARYNGOLOGY

(Including Diseases of the Larynx, Pharynx, and Nose.)

I—LECTURES AT THE VANDERBILT CLINIC UPON THE DISEASES OF THE THROAT AND NOSE, WITH LARYNGOSCOPIC AND RHINOSCOPIC DEMONSTRATIONS.—A systematic course of didactic lectures, fully illustrated, as the subject demands, by the presentation or demonstration of patients. During the course all of the minor surgical operations upon throat and nose are performed in the presence of the class. The subjects and dates of the lectures are announced in printed form at the beginning of the session. 1 hour a week for 28 weeks. Tu. at 2 P.M. Professor LEFFERTS

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE USE OF THE LARYNGOSCOPE AND RHINOSCOPE UPON THE "PHANTOM," AND UPON ADULT PATIENTS.—The course is based upon the principle of short preliminary explanations, followed by practical work by the student, directly and personally supervised by the instructor. The necessary instruments and apparatus are furnished by the department. 6 lessons for each student in a division of ten. Dr. DELAVAN

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

Equipment

The Department of Laryngology is equipped with a complete collection of the most approved modern instruments and appliances, by the best makers, for the diagnosis and treatment of the diseases of the throat and nose, and for the giving of instruction therein.

Among other things may be mentioned: a complete collection of the modern electric illuminating apparatus for the examination of patients; the electric laryngoscope; apparatus for the trans-illumination of the accessory cavities of the face; dilators, canulæ, and other instruments used in the treatment of laryngeal stenosis; operative instruments by Pfau of Berlin; laryngoscopic "phantoms," by Bock of Leipsic, for exercising the students in the use of the various instruments preliminary to the examination of the living subject; one hundred anatomical models of the healthy and diseased larynx, by Steiger of Leipsic, and Tobold of Berlin. Models of the normal larynx by Bock of Leipsic, and by Auzoux of Paris; physiological models to illustrate the normal movements and the various paralyses of the vocal cords; a diagrammatic model, to illustrate the mechanical interference of laryngeal neoplasms with the act of phonation; photographs of the living larynx, in health and disease; three

hundred and seventy water-color drawings by Wright of New York, of the pathological conditions of the larynx, pharynx, naso-pharynx, and nasal passages. These drawings are of large size, 42 x 36, to illustrate the clinical lectures. A collection of large drawings, illustrating the anatomy of the accessory sinuses of the nose. Also illustrated by a series of sections of the skull, made by Ward of Rochester, and by a series of frozen sections of the human head, prepared and mounted by Dr. Blake. Fränkel's photogravures of the same subjects. Drawings and instruments to illustrate the operation of intubation. Reproductions of all the earlier tubes for laryngeal catheterization and intubation. This latter collection is historically interesting as illustrating the evolution of the intubation tube. A special manikin, upon which the procedure of intubation may be practically demonstrated to a large number of students at one time. Wet preparations of the larynges of children, demonstrating *in situ* the properly sized intubation tube, and its exact position in the larynx at different ages (1-15 years), and a series of models by Elkins, of laryngeal diphtheria.

The pathological and anatomical museum of the department contains at present one hundred and eleven carefully prepared and mounted wet preparations of the larynx and its diseases. This collection is specially rich in the rarest specimens, such as benign neoplasms of the larynx, intrinsic and extrinsic, laryngeal cancer, and others.

MATERIA MEDICA AND THERAPEUTICS

Courses

Instruction in this department is both didactic and clinical.

I—THE DIDACTIC COURSE embraces general therapeutic considerations; modes of administering drugs; the individual drugs used in treating disease, their physiological effects and therapeutic uses, and the toxicological effects of such of them as are poisons; remedial measures other than the use of drugs, including electricity, dietetics, the use of water (including bathing and the administration of mineral waters); physical exercise and the like.

The department has a full collection of all the drugs lectured upon, as well as of their important preparations. After each lecture every student has an opportunity of examining specimens of all the drugs and preparations that formed the subject of the lecture. Lectures, 3 hours a week. Professor PEABODY.

Required, in the second and third years, of candidates for the degree of M.D. in the three- and four-years' courses.

II—THE CLINICAL INSTRUCTION in therapeutics is given at the bedside in the wards of the New York Hospital. See also page 39.

A large number of patients are presented to the class, and abundant opportunity is afforded of observing the modifications in the natural course of diseases which are produced by therapeutic procedures, including not only the action of drugs, but also the effects of such remedial measures as cold baths, wet packs, electricity, and the like.

Frequent opportunity is also given for the personal examination of patients by members of the class in attendance; and the entire course of protracted

diseases, with their variations in symptoms and physical signs as well as their treatment, can thus be observed.

Facilities are also extended for witnessing the performance of autopsies in fatal cases as frequently as the hospital regulations permit.

Twice a week for 3 months (M. and Th. at 2.30 P.M.). Professor PEABODY

Optional, in the second and third years, for candidates for the degree of M.D. *in the three-years' course*. Medical students are recommended to attend this course in the third year only.

NEUROLOGY

Courses

I—THE DISEASES OF THE MIND AND NERVOUS SYSTEM—Didactic lectures. 1 hour a week for 5 months; and 6 demonstrations, illustrated with the magic-lantern, of the pathology of nervous diseases. Professor STARR

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course*.

II—CLINICAL LECTURES AT THE VANDERBILT CLINIC—At these clinics all forms of nervous disease, including insanity, are demonstrated. During the months of didactic instruction the clinics are so arranged as to illustrate the clinical side of the subject lectured upon. 1 hour a week during the entire academic year. F. at 2 P.M. Professor STARR

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course*.

III—PRACTICAL INSTRUCTION IN NEUROLOGY—"Section teaching" by the Chief of Clinic, at which a division of ten students is taught the practical examination of nervous patients, including electro-diagnosis and electro-therapeutics. 6 lessons for each student at the Vanderbilt Clinic. Dr. PETERSON

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course*.

IV—INSANITY—4 Clinics at the Ward's Island Insane Asylum. Dr. PETERSON

Optional, in the second and third years, for candidates for the degree of M.D. *in the three-years' course*.

OBSTETRICS

Courses

I—THEORY AND PRACTICE OF OBSTETRICS—Lectures, 3 hours a week from October 1st to March 15th. Professor McLANE

Required, in the third year, of candidates for the degree of M.D. *in the four-years' course*.

II—RECITATIONS AND DEMONSTRATIONS—1 hour a week for each student. Dr. TUCKER

Required, in the second year, of candidates for the degree of M.D. *in the four-years' course*.

III—PRACTICAL INSTRUCTION AT THE SLOANE MATERNITY HOSPITAL—Members of the graduating class in medicine are required each to attend at this hospital a certain number of cases of labor. For this purpose the students of the fourth year are divided, at the beginning of the academic year, into sections of six, each section remaining on duty for one week. During this time they are furnished with lodgings, free of charge, on the grounds of the Medical School. Their rooms are connected with the hospital by electric wires, so that they may be summoned quickly to cases of emergency. Daily bedside instruction is given by the Instructor, who is the Resident Physician at the Sloane Hospital, and an examination on the work of the week is held there by him every Saturday. A daily clinical lecture is also given at the hospital. No specified number of hours a week. Dr. BRODHEAD

Required, in the fourth year, of candidates for the degree of M.D. in the four-years' course.

The Sloane Maternity Hospital

(See also page 9.)

This is upon the grounds of the College of Physicians and Surgeons, and the service at the hospital is under the exclusive direction of the Professor of Obstetrics, the Instructor being also the Resident Physician, as above stated.

The number of deliveries averages over nine hundred a year. These, with the obstetric operations, and the subsequent treatment of women and infants, afford invaluable bedside experience, such as is offered at no other medical school in this country.

OPHTHALMOLOGY

Courses

I—CLINICAL LECTURES AT THE VANDERBILT CLINIC UPON THE DISEASES OF THE EYE—In selected cases the diagnosis is made, treatment is applied, and operations are performed before the class.

After the lectures, as opportunity offers, microscopic demonstrations of the pathological histology of the eye are made by Dr. Holden. 1 hour a week throughout the academic year. Tu. at 3 P.M. Professor KNAPP

Required, in the third year, of candidates for the degree of M.D. in the three-years' course.

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE USE OF THE OPHTHALMOSCOPE—6 lessons for each student. Dr. MAY

Optional, in the third year, for candidates for the degree of M.D. in the three-years' course.

III—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE REFRACTION AND MOTILITY OF THE EYE—6 lessons for each student. Dr. CLAIBORNE

Optional, in the third year, for candidates for the degree of M.D. in the three-years' course.

IV—HOSPITAL CLINICS IN THE DISEASES AND THE OPERATIVE SURGERY OF THE EYE AT THE NEW YORK OPHTHALMIC AND AURAL INSTITUTE, 44 and 46 East 12th Street. (See page 40.) To these clinics the students are invited in sections. S. at 2.30 P.M., throughout the academic year. Professor KNAPP

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

OTOLOGY

Courses

I—PRACTICAL INSTRUCTION IN THE DIAGNOSIS AND TREATMENT OF THE DISEASES OF THE EAR AT THE VANDERBILT CLINIC—6 lessons for each student. Professor BUCK and Dr. COWEN

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

DEPARTMENT OF PATHOLOGY

(Including Pathology, Normal Histology, Bacteriology, and Photomicrography.)

General Statement

For convenience of administration, and for the better association of allied themes, the laboratories of Pathology, Normal Histology, Bacteriology, and Photomicrography are grouped together in the Department of Pathology under the direction of the Professor of Pathology.

Courses in Pathology

(See also page 41.)

I—PRACTICAL INSTRUCTION IN PATHOLOGICAL ANATOMY AND HISTOLOGY, AND IN BACTERIOLOGY AS APPLIED TO MEDICINE, is given in the large laboratory on the top floor of the north wing of the Medical School. Each student is given about one hundred sections or other permanent preparations, illustrating the more important and common lesions. These he mounts for the microscope and studies, making notes and sketches. This collection of specimens he retains for future reference.

The systematic course opens with a study of the various phases of inflammation; tumors are next studied; then the acute infectious diseases, their lesions and their relationship to micro-organisms. The student himself prepares, stains, and studies most of the more important pathogenic germs. The remainder of the course is devoted to the systematic study of the lesions of the viscera. Each student is furnished with a microscope and the necessary instruments and reagents. Delafield and Prudden's Handbook of Pathological Anatomy and Histology is used in this course. 6 hours a week for one half of the academic year. Demonstrations of gross pathological specimens are made as the material is gathered, and the members of the class may attend the autop-

sies held at the Roosevelt, Bellevue, New York, and City Hospitals. Professor PRUDDEN and Drs. HODENPYL, ELY, CHEESMAN, and NORRIE

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—PATHOLOGICAL ANATOMY AND HISTOLOGY, EXPERIMENTAL PATHOLOGY, AND APPLIED BACTERIOLOGY—A limited number of graduates in medicine, or other advanced workers, are admitted to the special laboratories for the pursuit of advanced lines of study in these themes. No fixed number of hours a week. Professor PRUDDEN, Drs. CHEESMAN, FREEBORN, HODENPYL, and VAN GIESON

Courses in Normal Histology

I—PRACTICAL INSTRUCTION IN THE LARGE LABORATORY, on the upper floor of the north wing of the Medical School. Sections and other preparations of the simple tissues and the more important thoracic and abdominal viscera of the normal body are given to each student during the course. These he is required to mount and study under the microscope, making notes and drawings of the entire series of specimens. This collection he retains for future reference. Each student is supplied with a microscope and with a tray of instruments and reagents. Piersol's Text-book of Normal Histology is used in this course. 6 hours a week for one half of the academic year. Drs. FREEBORN, VAN GIESON, EWING, KITCHEL, and BAILEY

Required, in the first year, of candidates for the degree of M.D. *in the four-years' course.* Elective for Seniors in the School of Arts.

II—PRACTICAL INSTRUCTION SIMILAR IN CHARACTER AND METHOD TO THAT UNDER I, but embracing as special themes the central nervous system, the skin, and the organs of special sense. 4 hours a week for one half of the academic year. Drs. FREEBORN, VAN GIESON, EWING, KITCHEL, and BAILEY

Required, in the second year, of candidates for the degree of M.D. *in the four-years' course.*

III—PRACTICAL INSTRUCTION IN MICROSCOPIC TECHNOLOGY AND ADVANCED NORMAL HISTOLOGY is given to a limited number of graduates in medicine, or other qualified workers, in the special laboratories on the fourth floor of the north wing of the college building. No fixed number of hours a week. Drs. FREEBORN and VAN GIESON

Courses in Bacteriology

I—PRACTICAL INSTRUCTION IN BACTERIOLOGY is given in the large laboratory on the upper floor of the new north side extension of the college building. This course opens with the study of the relationship of bacteria to other micro-organisms. It embraces the methods of staining, examining, and cultivating. The student is taught by practical exercises the methods of separating one species of bacteria from another, and the series of biological characters used in identification of the various forms. The general relationship of certain micro-organisms to disease is considered and illustrated. Finally some of the

hygienic aspects of bacteriology are studied by experiments in the sterilization of infectious materials, disinfection of the hands, etc., and by practice in biological air, water, milk, and soil analysis. 6 hours a week for one quarter of the academic year. Drs. CHEESMAN, DYAR, and JANEWAY

Required, in second year, of candidates for the degree of M.D. in the four-years' course.

II—SPECIAL LABORATORY COURSE—There is an opportunity each year for a few graduates in medicine, or other qualified workers, to receive a special course in practical bacteriology. The laboratory is abundantly supplied with apparatus for the culture and study of micro-organisms, and has under cultivation a large collection of identified species. In this course the applications of bacteriology to sanitation and to practical medicine are held in view.

Methods of preparation, staining, microscopic study, measurement, etc., of bacteria. Preparation of culture media ; study and record of observation, of selected typical species ; systematic analyses for determination of unknown species ; methods of isolation of species ; qualitative and quantitative biological examinations of water, soil, and air ; methods of determining pathogenic properties, disinfection, modes of testing value of germicides.

This course requires attendance at the laboratory during the entire day for from 6 to 9 weeks. Dr. CHEESMAN

Text-books : Abbott's Principles of Bacteriology, 2d edition ; Sternberg's Bacteriology.

Minor for the degree of A.M. or of Ph.D.

III—LABORATORY COURSE—As under Course II, with additional study and determination of known species of bacteria ; special study of the chemical products formed in the growth of bacteria, practical work in photomicrography, and the pursuit of some selected theme for original investigation. Professor PRUDEN and Drs. CHEESMAN and LEARNING

Major for the degree of A.M. or of Ph.D.

Research

Research in *Pathology* and *Bacteriology* may be pursued in the laboratories of this department by a limited number of graduate students or practitioners of medicine, or other advanced workers under the direction of the professor. To such men the large collection of pathological specimens preserved for microscopical study, and the collection of bacterial cultures belonging to this department are accessible. No specified number of hours a week. Professor PRUDEN

Fellowships

For the Fellowships open to persons wishing to do special work under the Professor of Pathology, see page 42.

Museum

The museum of pathology is made use of in the work of this department, both for the instruction of medical students, and as a place of deposit for specimens showing new or rare forms of lesions.

Photography

Practical instruction is given to a limited number of men in the photographic laboratories of the College, in the technique of photography and photomicrography for scientific purposes.

The time necessary for the acquirement of this technique varies with the facility of the student and the hours devoted to the theme, and is subject to special arrangement.

The facilities of these laboratories may be drawn upon for purposes of record and illustration by instructors in various departments of the college and by others. Dr. LEAMING

Equipment

The Department of Pathology is to occupy in the autumn of 1895 the large additional space which the new college buildings will furnish. The large class-room on the upper floor of the north wing will be used as at present for the classes in Normal Histology and in Pathology. The fourth floor will be devoted to the pathological museum and to a large preparation laboratory, a workshop, cold-storage, and the like. The new space will be devoted to a general laboratory and to private rooms for instructors and advanced workers in Pathology and to undergraduate and research work in Bacteriology.

This new space will be amply lighted, fully furnished and equipped with such new apparatus as the rapidly growing sciences of Pathology and Bacteriology require.

PHYSICS AND CHEMISTRY

(Including Toxicology.)

Courses

II.—PHYSICS AND GENERAL CHEMISTRY—The general properties of matter ; heat ; light ; electricity ; the general principles and laws of chemical combination ; the history, occurrence, preparation, properties, and uses of the more important elements and their compounds. Special attention is devoted to the applications of chemistry to hygiene and medicine. Text-books: Ganot's Physics, or Barker's Physics ; Fownes' Chemistry, or Newth's Chemistry. Lectures combined with demonstrations, 4 hours a week throughout the academic year. Professor CHANDLER, assisted by Mr. FELLEW, Dr. DEGHUÉE, and Mr. JOHNSON

Required, in the first year, of candidates for the degree of M.D. *in the four-years' course.*
Elective for Seniors in the School of Arts.

IIA.—PRACTICAL INSTRUCTION IN PHYSICS—*At the Physical Laboratory, Hamilton Hall, corner of 49th Street and Madison Avenue.* The work will include : accurate measurements of length, area and volume, weighing, determinations of specific gravity in several ways ; the use and testing of hydrometers and thermometers ; experiments in acoustics. Much attention will be given to the principles of lenses and optical instruments used in medicine. Microscopes.

will be tested for the correction of their lenses, magnifying power, and other properties. Analysis of mixtures will be made with the spectroscope, absorption spectra will be studied, also indices of refraction, and work will be performed with the polariscope. In electricity the student will be made practically familiar with the fundamental principles and measurements of electromotive force, current, and resistance, determination of these quantities being made with many different forms of instruments and by various methods. Laboratory work, 2 hours a week for one half of the academic year, under the direction of Professor ROOD, Professor HALLOCK, Mr. CUSHMAN, Mr. GORDON, and Mr. PARKER, assisted by Mr. TROWBRIDGE, Mr. H. S. CURTIS, and Mr. WADE

Required, in the first year, of candidates for the degree of M.D. in the *four-years' course*. Elective for Seniors in the School of Arts.

XXVIII—PRACTICAL INSTRUCTION IN PHYSIOLOGICAL AND MEDICAL CHEMISTRY—The preparation and study of typical animal and vegetable substances, such as the carbo-hydrates, the fats, the proteids, and of the inorganic matters of most importance, including the commonest acids, bases, and salts; distillation; fermentation; artificial digestion; the sanitary analysis of drinking water, and the properties of blood, milk, and bile.

The last portion of the course is devoted to the microscopical and chemical examination of the urine. Quantitative methods are taught in this as far as practicable, and the students are required to examine carefully numerous samples of pathological urines collected from the various hospitals and clinics of the city.

The spectroscope and microscope are brought into use wherever of value in connection with chemical work.

Text-book: Pellew's Manual of Medical and Physiological Chemistry.

Laboratory work, 4 hours a week for one half of the academic year.

Conferences, each week, on the subjects dealt with in the laboratory work of that week. 2 hours a week for one half of the academic year.

Mr. PELLEW, Dr. DEGHUÉE, and Mr. JOHNSON

Required, in the first year, of candidates for the degree of M.D. in the *four-years' course*. Elective for Seniors in the School of Arts. Minor for the degree of A.M.

XL—TOXICOLOGY—The preparation, study, and detection of the more important mineral, vegetable, and animal poisons. Fifteen weekly lectures and fifteen laboratory exercises of 2 hours each. The course is given twice during the year, the class being divided into four sections, two of which pursue the subject during the first session, the other two sections during the second session. Mr. PELLEW, Dr. DEGHUÉE, and Mr. JOHNSON

Required of second-year students in the School of Medicine.

Equipment

The lectures of Course II., given at the building of the School of Medicine, are fully illustrated by experiment. There is a large collection of the chemical elements and their compounds, both natural and artificial, for this purpose; and an ample outfit of modern apparatus.

Of this there may be referred to : balances for determining specific gravity and illustrating the principle of Archimedes ; air-pump and accessories ; apparatus for illustrating the laws of heat, including appliances for the liquefaction of gases, distillation, and other processes, and Melloni's apparatus for radiant heat ; optical instruments, including the requisites for demonstrating to a large audience spectrum analysis and polarized light ; machines and appliances for statical electricity ; galvanic and thermo-batteries, magneto and dynamo-machines ; medical batteries ; Rhumkorff coils, both large and small.

The electric telegraph, electrolysis and electro-metallurgy, electric lighting, both arc and incandescent, and the telephone are shown in their various forms.

The laboratories of physiological and medical chemistry and toxicology are also at the School of Medicine, and are abundantly supplied with appliances for practical work, including microscopes and spectroscopes.

The department of Physics, by which the laboratory instruction is given in this subject, occupies nine rooms at the School of Arts. These are supplied with the street current of the Edison incandescent system.

Among the many pieces of apparatus here, the following may be especially mentioned :

For measurements of length, three linear and three circular dividing engines, a Geneva Society comparator and dividing engine ; a Grunow cathetometer, spherometers, optical levers, and micrometers of many kinds.

For measurements of mass, eight balances with weights, specific gravity apparatus, hydrometers, aërometers, Westfall and Jolly balances, and the various forms of vapor-density apparatus.

Standard mercurial barometers, aneroid and Mariotti barometers, Kater's and Borda's pendulums, and apparatus for studying elasticity ; also monochords, Quincke's apparatus, Kundt's dust figure apparatus, and sets of organ pipes and tuning-forks for the study of sound. Thermometers and apparatus for calibration and determination of zero and boiling points ; also apparatus for the determination of co-efficients of expansion, for latent and specific heats, and for air-thermometry and calorimetry.

The optical rooms are furnished with eight spectrometers of different designs, small telescopes, opera glasses, microscopes, sets of lenses, prisms, gratings, goniometers, sextant, optical benches, photometers, saccharimeters, total reflectometers, and apparatus for calorimetry, polarized light, and spectroscopy.

In the rooms devoted to electricity are nine galvanometers of various patterns, high and low resistance, ballistic and dampened ; electrometers, magnetometers, rheostats, and bridges of all types ; condensers, batteries, keys, arc and incandescent lamps, ammeters, and voltmeters.

PHYSIOLOGY

Courses

I—GENERAL PHYSIOLOGY—Structure of protoplasm ; physiology of the cell ; physiological division of labor and evolution of special functions ; irritability ; contractility ; heliotropism ; geotropism ; chemotropism ; general principles of

secretion ; the nerve cell ; the nerve impulse ; reflex action ; the germ cells. Lectures, 1 hour. Professor LEE

Open to qualified candidates for the degree of M.D.

Open as an elective to Seniors who have had at least one year of General Biology, and, in conjunction with Course III, to candidates for the degree of A.M. or of Ph.D.

II—THE PHYSIOLOGY OF MAN AS RELATED TO THAT OF OTHER MAMMALS AND OF LOWER VERTEBRATES—Lectures and demonstrations, 4 to 6 hours. Beginning with the session of 1894-5, this course treats of different portions of its subject in alternate years, certain introductory lectures only being repeated annually. Professors CURTIS and LEE and Dr. CUNNINGHAM

Required, in the first and second years, of candidates for the degree of M.D.

Open as an elective to Seniors in the School of Arts, and, in conjunction with Course IV, to candidates for the degree of A.M. or of Ph.D.

III—LABORATORY COURSE IN GENERAL PHYSIOLOGY—5 hours. Professor LEE

Open to qualified candidates for the degree of M.D., and, in conjunction with Course I, to qualified candidates for the degree of A.M. or of Ph.D.

IV—LABORATORY COURSES—Personal instruction, private reading, practical work, and research. No definite number of hours. Professors CURTIS and LEE and Dr. CUNNINGHAM

Open to qualified candidates for the degree of M.D., and to qualified candidates for the degree of A.M. or of Ph.D.

Research

V—THE LABORATORY is open for research, under the direction of its officers, to advanced workers. No definite number of hours a week. Professors CURTIS and LEE and Dr. CUNNINGHAM

Fellowships

For the Alumni Association Fellowships open to persons desiring to do special work under the Professor of Physiology, see page 42.

For the University Fellowships, also open as above, see the "Columbia College Catalogue."

Marine Laboratory

An investigator's room at the Marine Biological Laboratory at Wood's Holl, Mass., has been provided by the University for the use of the Department of Physiology.

This renders possible, during the summer, researches upon the physiology of the marine fauna.

Equipment

The Department of Physiology possesses :

(1) The main laboratory, for research and the preparing of demonstrations, covering 1769 square feet and lighted on three sides.

(2) Two rooms for optical or psychological work or for photography, communicating with the main laboratory and with one another. One of these has a free southerly exposure for the heliostat.

(3) The Swift Physiological Cabinet, for the accommodation of a specially endowed and very full collection of apparatus of precision, mainly for research.

(4) Two smaller laboratories, for the officers of the department and for practical classes.

(5) Easy access to a large lecture-room, specially fitted for experimental teaching; and to demonstration-rooms for small classes.

The physiological journals in English, German, and French are accessible at the laboratory to advanced students; also the most important monographs and other books both modern and ancient.

A skilled mechanic is employed to devote his entire working time, at the laboratory, to the care and improvement of the plant, including the making, altering, and repairing of special apparatus. He also assists in the scientific manipulations.

The following machines and apparatus deserve mention:

An upright seven-horse-power steam-engine, mounted against a pier upon an iron bracket, to avoid floor vibrations, and working a shaft which runs the whole length of the main laboratory; two steam lathes; apparatus worked by steam for artificial respiration; Ludwig's "Schlagwähler"; kymograph for a long roll of paper, and high-speed drum kymograph, both worked by steam; high-speed drum kymograph worked by weights; two drum kymographs of the spring pattern; two single drums, to be revolved by hand, for students' use; four "Basel stands" for the fine adjustment of recording levers; Zeiss scales and other instruments for reading and measuring curves, including a planimeter; electro-magnetic chronographs and control hammer; seconds pendulum; interrupter clock; automatic dry-contact tuning-forks; short-beam quantitative balance; copper voltameter; milliampère and ampère-meters; Wiedemann-duBois galvanometer, with coils of high and low resistance; Haüy's bar, telescope, and milk-glass scale; capillary electrometers; ohmmeter, for resistances of from 0.001 to 200,000 ohms; Edelmann's faradimeter; nine horizontal duBois induction coils; two upright ditto; a complete collection of duBois-Reymond's other apparatus; moist chambers and muscle levers; upright rheochord; mechanical tetanomotor; differential rheotome; Marey's tambours, cardiographs, stethograph, and explorer of the human muscles; sphygmographs; plethysmograph; two single and one double recording mercurial manometers; spring manometers; tonographs; "stromuhr"; frog-heart apparatus; thermo-electric apparatus; constant-pressure injection apparatus; two mercurial gas pumps; large spectroscope; direct vision spectroscope; Ladd spectroscope; four micro-spectroscopes; heliostat; eight microscopes and accessories; Thoma's microtome; Anschütz's "Schnellseher"; numerous instruments and models for the investigation and demonstration of the physiology of sight and hearing; casts and models of the brain; Dalton's apparatus for making sections of the human brain.

PRACTICE OF MEDICINE

Courses

I—THE PRACTICE OF MEDICINE—Didactic lectures. 2 hours a week for 5 months, and 3 hours a week for 3 months. Professor DELAFIELD

Required, in the second and third years, of candidates for the degree of M.D., *in the three-years' course.*

II—CLINICAL LECTURES ON GENERAL MEDICINE AT THE VANDERBILT CLINIC—1 hour a week throughout the academic year. Professor DELAFIELD
Th., at 3 P.M.

Required, in the second year, of candidates for the degree of M.D., *in the three-years' course.*

III—PHYSICAL DIAGNOSIS—Practical instruction. 21 lessons for each student. Drs. JACKSON and LOCKWOOD

Required, in the second year, of candidates for the degree of M.D., *in the three-years' course.*

IV—HOSPITAL CLINICS IN GENERAL MEDICINE—Roosevelt Hospital (see page 39). Professors DELAFIELD and DRAPER and Dr. ROOSEVELT
M. at 4 P.M., throughout the academic year.

New York Hospital (see page 39). Professors DRAPER and PEABODY.
(See "Materia Medica and Therapeutics.")

M. and Th. at 2.30 P.M. in November, December, January, February, and March.

Bellevue Hospital (see page 39). Drs. ROOSEVELT and JAMES, and Professor JACOBI. (See "Children, Diseases of.")

Tu. at 1.30 P.M. throughout the year

Presbyterian Hospital (see page 40). Professor KINNICUTT

Wednesdays at 2.30 P.M.; Saturdays at 3 P.M., in January and February.

Attendance at Hospital Clinics is optional in the second and third years for candidates for the degree of M.D., *in the three-years' course.*

V—HOSPITAL CLINICS IN CONTAGIOUS DISEASES—Willard Parker and Riverside Hospitals (see page 40). Dr. BRANNAN

Admission by invitation of small sections, after special registration.

Tu. and S. at 3 P.M., in November, December, March, and April.

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

SURGERY

Courses

I—SURGICAL PATHOLOGY. GENERAL AND REGIONAL SURGERY—Didactic lectures. 3 hours a week throughout the academic year. Professors BULL and WEIR

Required, in the second and third years, of candidates for the degree of M.D. *in the three-years' course.*

II—CLINICS IN GENERAL SURGERY AT THE VANDERBILT CLINIC—I hour a week throughout the year. Professors BULL and WEIR
M. at 12 M.

Required, in the second year, of candidates for the degree of M.D. *in the three-years' course.*

III—MINOR SURGERY AND BANDAGING—Practical instruction at the Vanderbilt Clinic. 12 lessons for each student. Dr. ELLSWORTH ELIOT

Required, in the second year, of candidates for the degree of M.D. *in the three-years' course.*

IV.—ORTHOPÆDIC SURGERY—Practical instruction at the Vanderbilt Clinic. 8 lessons for each student. Dr. WHITMAN

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

V—OPERATIVE SURGERY UPON THE CADAVER—Practical instruction to classes of six members each. Each student performs for himself upon the cadaver the principal operations, including the ligation of arteries, amputations, resections, and the removal of parts. Special attention is paid to operations upon the abdominal viscera. 13 to 14 lessons for each student. Drs. HARTLEY and PARKER

Optional, in the third year, for candidates for the degree of M.D. *in the three-years' course.*

VI—HOSPITAL CLINICS IN GENERAL OPERATIVE SURGERY—New York Hospital. (See page 39).

S. at 2.30 P.M. throughout the academic year. Professors BULL and WEIR

W. at 2.30 P.M. from October to February. Professor WEIR

Th. at 3 P.M. from February to June. Dr. HARTLEY

Roosevelt Hospital, Syms Operating Theatre. (See page 39.)

S. at 2.30 P.M. throughout the academic year. Professor MCBURNEY

Bellevue Hospital. (See page 39.)

Th. at 2.30 P.M. throughout the academic year. Drs. F. H. MARKOE and GALLAUDET

St. Luke's Hospital. (See page 40.)

F. at 2.30 P.M. from October to February. Dr. F. H. MARKOE

Presbyterian Hospital. (See page 40.)

Tu. at 2.30 P.M. throughout the academic year. Dr. MCCOSH

Attendance at Hospital Clinics is optional, in the second and third years, for candidates for the degree of M.D. *in the three-years' course.*

VENEREAL DISEASES

Courses

I—VENEREAL AND GENITO-URINARY DISEASES—Clinical lectures at the Vanderbilt Clinic. 1 hour a week throughout the academic year. Professor TAYLOR

Required, in the third year, of candidates for the degree of M.D. *in the three-years' course.*

II—PRACTICAL INSTRUCTION AT THE VANDERBILT CLINIC IN THE DIAGNOSIS AND TREATMENT OF VENEREAL AND GENITO-URINARY DISEASES—6 lessons for each student. Dr. HAYDEN

Optional, in the third year, for candidates for the degree of M.D. in the three-years' course.

III—HOSPITAL CLINICS IN VENEREAL AND GENITO-URINARY DISEASES.—Bellevue Hospital. (See page 39.)

Tu. at 2 P.M. throughout the academic year. Professor TAYLOR
City Hospital, Blackwell's Island (formerly Charity Hospital). See page 40.
W. at 2 P.M., October 1st to January 1st. Dr. HAYDEN

The Hospital Clinics are optional, in the third year, for candidates for the degree of M.D. in the three-years' course.

TEXT-BOOKS AND INSTRUMENTS

The following list comprises the text-books and instruments recommended. The text-books are *for reference only*, unless otherwise specified in the notices of the several departments.

For the convenience of those who wish to reckon up their expenses in advance, there are appended the lowest prices at which the books, in cloth bindings, can be purchased in New York. These prices are liable to fluctuations. As a rule, the latest editions only of text-books should be purchased:

Morris's Anatomy, \$6; Quain's Anatomy, not completed; Gray's Anatomy, plain, \$4.80; with colored plates, \$5.60; Dexter's Anatomy of the Peritonæum, \$1.20; Foster's Physiology, \$3.60; Fownes' Chemistry, \$2.20; *or* Newth's Inorganic Chemistry, \$1.58; Ganot's Physics, \$4; *or* Barker's Physics, \$4.50; Pellew's Medical and Physiological Chemistry, \$2; H. C. Wood's Therapeutics, \$4.80; E. Curtis's General Medical Technology, 80 cents; Warren's Surgical Pathology, \$6; Tillman's Principles of Surgery and Surgical Pathology, \$5; Treves' Manual of Surgery, \$4.80; American Text-Book of Surgery, \$7; Playfair's Midwifery, \$3.20; *or* Lusk's Midwifery, \$4; American Text-Book of Gynecology, \$6; Long's Syllabus of Gynecology, \$1; Keating and Coe's Clinical Gynecology, \$6; Duane's Medical Students' Dictionary, \$3.40; Pepper's American Text-Book of Medicine, \$10; Delafield and Prudden's Pathological Anatomy and Histology, \$4.80; Piersol's Normal Histology, \$2.80; Sternberg's Manual of Bacteriology, \$8; Abbott's Principles of Bacteriology, \$2.20; Ashby and Wright on the Diseases of Children, \$4; Henoch's Lectures on Diseases of Children, translated by John Thomson; Taylor's Venereal Diseases; Swansey's Diseases of the Eye, \$2.40; Buck's Manual of Diseases of the Ear, \$2; Crocker's Diseases of the Skin, \$4; Duhring's Diseases of the Skin, \$4.80; Hyde's Diseases of the Skin, \$4; Jackson's Handbook of Skin Diseases, \$2.20; Bosworth's Diseases of the Nose and Throat, \$9.60; Gowers' Diseases of the Nervous System, \$6.40; Dana's Text-Book of Nervous Diseases, \$2.60; Kirchhoff's Handbook of Insanity, \$2.20.

A "dissecting case," containing all the necessary instruments, can be bought for from \$2.35 to \$3.35.

CLINICS

The clinical courses offered for 1895-96 are all given under their appropriate headings in the foregoing pages, in connection with the didactic teaching.

It seems proper also to make the following connected statement of the opportunities for clinical studies in all branches which are available for matriculates of the College of Physicians and Surgeons.

When not otherwise specified, the exercise is a clinical lecture, clinical "section teaching" being noticed, in what follows, only in certain cases. For the courses in "section teaching" the reader is referred to the foregoing classified statements of instruction. At many clinics operations performed before the class are an important feature.

All the clinical instruction for 1895-96 is in connection with the three years' course.

Clinics at the Vanderbilt Clinic

(See page 8.)

Twelve clinics are given each week at the Vanderbilt Clinic, as follows:

SURGICAL—Professors BULL and WEIR; Mondays, 12 M.

ORTHOPAEDIC SURGERY—Professor GIBNEY; Fridays, 12 M.

DISEASES OF THE EAR—Professor BUCK and Dr. COWEN; Clinical Instruction to Sections; Mondays and Wednesdays, 2 P.M.

DISEASES OF THE SKIN—Professor FOX; Mondays, 3 P.M.

DISEASES OF THE THROAT AND NOSE (with laryngoscopic and rhinoscopic demonstrations)—Professor LEFFERTS; Tuesdays, 2 P.M.

DISEASES OF THE EYE—Professor KNAPP; Tuesdays, 3 P.M.

DISEASES OF CHILDREN—Professor JACOBI; Wednesdays, 2.30 P.M.

VENEREAL DISEASES—Professor TAYLOR; Thursdays, 2 P.M.

MEDICAL—Professor DELAFIELD; Thursdays, 3 P.M.

DISEASES OF THE MIND AND NERVOUS SYSTEM—Professor STARR; Fridays, 2 P.M.

DISEASES OF WOMEN—Professor TUTTLE; Fridays, 3 P.M.

Hospital Clinics

See the several departments. For appointments to the house-staffs of the hospitals, see page 41.

Besides the Vanderbilt Clinic, the general and special hospitals of New York afford most important fields for clinical teaching. This college is strongly represented on the staffs of these institutions, and regular clinical instruction at hospitals is made a prominent feature of the curriculum. *Admission is free to all matriculated students.* At all the following hospitals instruction is given by officers of the college.

SLOANE MATERNITY HOSPITAL, corner of Fifty-ninth Street and Tenth Avenue. See pages 9 and 26.

ROOSEVELT HOSPITAL—This has long been the seat of thorough clinical work, and has become of special importance in this respect from its position immediately opposite the new buildings of the College of Physicians and Surgeons upon Fifty-ninth Street, between Ninth and Tenth Avenues. Moreover, this hospital, a few years ago, received a bequest of several hundred thousand dollars for the erection and endowment of THE SYMS OPERATING THEATRE, which now offers unrivalled facilities for instruction in operative surgery.

THE MCLANE OPERATING THEATRE is used for operating gynecology by Professor Tuttle exclusively. See page 22.

The Roosevelt is a general hospital of one hundred and eighty beds, and it also possesses a flourishing out-patient department.

Public clinics are given here as follows, throughout the college session :

Medical—Mondays at 4 P.M., Professors DELAFIELD and DRAPER and Dr. ROOSEVELT

Surgical—Saturdays, at 2.30 P.M., Professor MCBURNEY

Gynecological—Tuesdays, Thursdays, and Saturdays, at 2.30 P.M., Professor TUTTLE

NEW YORK HOSPITAL, Fifteenth Street, between Fifth and Sixth Avenues—Reached from the Medical College by taking the Sixth Avenue Elevated Railroad at the corner of Ninth Avenue and Fifty-ninth Street, and leaving the cars at the corner of Fourteenth Street and Sixth Avenue ; or by the surface cars.

This is a general hospital of the highest class, of one hundred and fifty beds, with an out-patient department.

The public clinics are the :

Medical—Mondays and Thursdays, at 2.30 P.M., from November to April ; Professors DRAPER and PEABODY

Surgical—Wednesdays, 2.30 P.M., October to February, Professor WEIR ; Saturdays, 2.30 P.M., Professors WEIR and BULL ; Thursdays, at 3.30 P.M., February to June, Dr. HARTLEY

BELLEVUE HOSPITAL, Twenty-sixth Street and East River—Directly accessible from the college by the horse-cars of the Belt Line, which run from the door of the college to that of the hospital ; or, by leaving the horse-car at the corner of Fifty-ninth Street and Third Avenue, and taking the Third Avenue Elevated train to the corner of Third Avenue and Twenty-eighth Street.

This hospital has eight hundred beds and receives sixteen thousand patients annually, of whom one fourth are in the exclusive charge of officers of this college.

The service of the out-patient department also covers a great range of practice ; and two newly built operating theatres, a large and a smaller one, are in full use.

The following clinics are held here during the session :

Medical—Tuesdays, 1.30 P.M., Professor JACOB, and Drs. ROOSEVELT and JAMES

Surgical—Thursdays, 2.30 P.M., Drs. F. H. MARKOE and GALLAUDET

Diseases of Children—Tuesdays, 2.30 P.M., from April to June, Professor JACOB

Venereal and Genito-Urinary—Tuesdays, 2 P.M., Professor TAYLOR

ST. LUKE'S HOSPITAL, Fifth Avenue and Fifty-fourth Street

Surgical—Dr. F. H. MARKOE gives a clinic to which students are admitted on Fridays, at 2.30 P.M., from August to February.

PRESBYTERIAN HOSPITAL, Madison Avenue and Seventieth Street—Accessible from the Medical School by the Fifty-ninth Street horse-cars of the Belt Line to Madison Avenue, and by the cars on this avenue to Seventieth Street.

This is a large general hospital of three hundred and thirty beds. The following clinics will be held here throughout the session :

Surgical—Tuesdays, 2.30 P.M., Dr. MCCOSH

Medical—January and February, Wednesdays, 2.30 P.M., Saturdays, 3 P.M., Professor KINNICUTT

RANDALL'S ISLAND HOSPITALS (Department Public Charities and Correction)—Boat leaves foot of East 120th Street at 2 P.M.

Clinic on Idiocy, Imbecility, and Cretinism—Saturdays, Dr. PETERSON

CITY HOSPITAL (formerly CHARITY HOSPITAL), Blackwell's Island, East River—To reach this institution the steamer should be taken at the foot of East Fifty-second Street. This hospital offers a peculiarly rich field for the study of venereal and genito-urinary diseases, over two thousand such cases being received yearly. Dr. HAYDEN gives a clinic as follows :

Venereal and Genito-urinary—Wednesdays, 2 P.M., from October 1st to January 1st.

WILLARD PARKER HOSPITAL, foot of East 16th Street ; reached from the medical school by the cars of the Belt Line : RIVERSIDE HOSPITAL, North Brother Island, East River ; reached by special boat from the foot of East 138th Street.

These hospitals, in charge of the New York City Health Department, offer a rich field for the study of *Contagious Diseases* not admitted to other hospitals in the city, such as diphtheria, scarlet fever, small-pox, typhus fever, measles, and others. Dr. J. W. BRANNAN gives a clinic to which students are admitted in small sections after special registration, on Tuesdays and Saturdays, at 3 P.M., in November, December, March, and April.

NEW YORK CANCER HOSPITAL, One Hundred and Sixth Street and Eighth Avenue—Elevated Railroad station, One Hundred and Fourth Street and Ninth Avenue. It can be reached also by the Eighth Avenue surface road.

One clinic a week is held here, viz. :

Gynecological—Tuesdays, 9 A.M. Dr. GEO. W. JARMAN

NEW YORK OPHTHALMIC AND AURAL INSTITUTE, 44 and 46 East Twelfth Street—Reached by the Sixth Avenue Elevated train, which should be left at the Fourteenth Street station ; or by the Ninth Avenue and Broadway Cable cars.

This hospital has forty beds, and a large daily dispensary service is held for diseases of the eye and ear. Throughout the session the following clinic is held :

Ophthalmological—(Admission by invitation of sections.) Selected cases for diagnosis and treatment ; the most important operations on the eye. Saturdays, 2.30 to 5 P.M. Professor KNAPP

DEMONSTRATIONS OF PATHOLOGICAL ANATOMY

Autopsies are made at the Roosevelt, New York, Bellevue, and City Hospitals during the session before the students, and usually at regular hours. The hospital pathologists demonstrate and explain the lesions discovered. Notices of autopsies are posted upon the bulletin-board of the college.

The hours for autopsies are as follows :

ROOSEVELT HOSPITAL—2 P.M., Dr. HODENPYL

NEW YORK HOSPITAL—2 P.M.

BELLEVUE HOSPITAL—I P.M., Dr. ELY

CITY HOSPITAL—Thursdays and Saturdays, Dr. VAN GIESON, at hours announced upon the bulletin-board.

HOSPITAL APPOINTMENTS

By a resolution of the Commissioners of Public Charities and Correction, the Faculty of this college is entitled to nominate for appointment by the commissioners, after competitive examination in the college, its proportion of members of the house staff of Bellevue Hospital ; such members to be attached to that division of the said hospital which has been assigned to the care of the college.

Four nominations, two medical and two surgical, are made each year by the college from among its graduates under the above resolution.

One medical and one surgical assistant go on duty upon July 1st ; in the same way one medical and one surgical assistant upon January 1st.

The choice as to character of service, and the time of beginning the same, is given to the successful candidates in the order of their merit.

The surgical nominees all serve the hospital for six months in each of the four grades of ambulance surgeon, junior assistant, senior assistant, and house surgeon ; each one having thus a total of two years' experience on the " House Staff."

The medical nominees serve each in the three grades of junior assistant, senior assistant, and house physician.

Similar positions are filled twice in each year, by public competitive examinations, open to graduates of this college, in the following institutions :

The " non-collegiate " division of Bellevue Hospital ; the New York Hospital ; the Roosevelt Hospital ; St. Luke's Hospital ; the City Hospital, Blackwell's Island ; St. Vincent's Hospital ; St. Francis' Hospital ; the German Hospital ; the Mount Sinai Hospital ; the Presbyterian Hospital ; the Woman's Hospital ; the Brooklyn Hospital ; St. Catherine's Hospital, Brooklyn ; St. Peter's Hospital, Brooklyn ; the King's County Hospital, Flatbush, L. I.

ALONZO CLARK SCHOLARSHIP

By the will of the late Alonzo Clark, M.D., LL.D., for many years president of the College of Physicians and Surgeons, and professor of pathology and practical medicine, it has been placed in the power of the faculty to

bestow a scholarship, with an income of about seven hundred dollars a year, for the purpose of promoting the discovery of new facts in medical science.

This was bestowed for a period of three years, beginning Oct. 1, 1894, upon Ira Van Gieson, M.D., of New York City.

FELLOWSHIPS OF THE ALUMNI ASSOCIATION

In June, 1891, the Trustees, at the request of the Alumni Association of the College of Physicians and Surgeons, established three fellowships to be known as the Fellowships of the Alumni Association of the College of Physicians and Surgeons, the provision for which is made annually by the Association.

These fellowships are open to graduates of the College of Physicians and Surgeons who have shown special aptitude for scientific research in the departments of anatomy, physiology, or pathology. They are held for a period of two years and have an annual value of five hundred dollars each. The appointments to these fellowships are made by the executive committee of the Alumni Association from candidates presented to them by the professor of anatomy, the professor of physiology, and the professor of pathology.

The persons appointed to these fellowships are expected to pursue scientific research in the department which they may elect, in this country, either in the schools of Columbia College, where they enjoy free tuition and the privileges of the laboratories, or in other institutions at their own expense. At the end of two years the holders of these fellowships are expected to present to the Association theses containing evidence of independent or original work in their special departments. The next appointments to these fellowships will be made in May, 1896.

The names of the successful candidates for these fellowships will be announced at the commencement following their appointment, and will be published in the annual catalogue.

The fellowships are held during 1894-95 and 1895-96 by :

Frederick J. Brockway, M.D.

Richard H. Cunningham, M.D.

William S. Stone, M.D.

PRIZES

(All prizes are publicly awarded at the College Commencement.)

Harsen Prizes for Clinical Reports

Founded in 1859, by the late Jacob Harsen, M.D., a graduate of the College of Physicians and Surgeons.

Three annual prizes are offered for the three best reports, in writing, by students of the College of Physicians and Surgeons, of the clinical instruction given at the New York Hospital during any four consecutive months of the year which ends on commencement day.

These reports must embrace the clinical teaching of both the visiting physician and the visiting surgeon on duty.

The prizes are as follows :

A First Prize of one hundred and fifty dollars ; a Second Prize of seventy-five dollars ; a Third Prize of twenty-five dollars.

A " Harsen Prize Medal " and a diploma are given with each prize.

Harsen Prizes for Proficiency at Examination

In consequence of the great increase in value of the Harsen Prize Fund, in addition to the three prizes above mentioned, there are awarded three Harsen prizes for proficiency at examination, viz. :

A First Prize of five hundred dollars ; a Second Prize of three hundred dollars ; a Third Prize of two hundred dollars.

The award of these prizes is made as follows :

The ten members of each graduating class who, at their examination for the degree of Doctor of Medicine, have shown the highest proficiency in all the branches combined, receive each a diploma of " Examination Honors," and are entitled to take part in special competitive examinations, the three most meritorious competitors at which receive the first, second, and third prizes, respectively.

The competitive examinations consist :

I—Of an examination in writing, covering *all the branches* of medical teaching.

II—Of an examination upon the cadaver in *practical anatomy*, conducted by the professor of anatomy.

III—Of practical examinations in *clinical medicine* and *clinical surgery*, conducted at the hospitals by the professors of medicine and surgery respectively.

The relative merits of the competitors are decided, and the award of the prizes made, by a committee of three judges, consisting of the president of the College of Physicians and Surgeons, the president of the Association of the Alumni, and a resident alumnus selected by them.

Alumni Association Prize

This is a biennial prize of *five hundred dollars* open for competition to the alumni of the College of Physicians and Surgeons. It is awarded for the best medical essay submitted upon any subject the writer may select, and is open to competition in alternate years with the Cartwright prize.

If no one of the competing essays be deemed sufficiently meritorious, the prize is not awarded.

An essay, in order to be held worthy of the prize, must contain the results of original investigations made by the writer.

This prize is not awarded to any essay which is the work of more than one author, or which is at the same time submitted for another prize.

Each competitor is required to send with his essay to the Prize Committee a statement that these requirements have been complied with.

Essays in competition for the prize to be awarded at commencement, 1896,

must be sent to the secretary of the Alumni Association on or before April 1, 1896.

Competing essays must each be marked with a device or motto, and accompanied by a sealed envelope, similarly marked, containing the name and address of the author.

Cartwright Prize of the Alumni Association

The prize consists of *five hundred dollars*, and is offered for competition in alternate years with the Alumni Association prize.

It is awarded on the same terms as the latter, *except that it is open to universal competition.*

Essays in competition for the prize to be awarded at commencement, 1897, must be sent to the secretary of the Alumni Association on or before April 1, 1897.

Stevens Triennial Prize

Established by the late Alexander Hodgdon Stevens, M.D., formerly president of the College of Physicians and Surgeons, on the following plan :

The prize, awarded triennially, consists of the interest yielded by the principal fund during three years, and amounts to *two hundred dollars*.

The administration of the prize is entrusted to a commission, consisting of the president of the College of Physicians and Surgeons (*ex-officio*), the president of the Alumni Association (*ex-officio*), and the professor of physiology (*ex-officio*) in the same institution.

The prize is awarded to no essay unless it is sufficiently meritorious and includes the results of original research by the writer upon the subject chosen.

In 1897 this prize will be given to the *best medical essay* submitted, upon any subject the writer may select.

The competing essays must be sent in to the president of the College of Physicians and Surgeons, New York, on or before the first day of January, 1897. Each essay must be designated by a device or motto, and must be accompanied by a sealed envelope, bearing the same device or motto, and containing the name and address of the author. The envelope belonging to the successful essay will be opened, and the name of the author announced, at the annual commencement of the college in 1897 ; at which time, also, the subjects for the next triennial prize (1900) will be announced.

This prize is open for universal competition.

Joseph Mather Smith Prize

The fund for this prize was given by the relatives, friends, and pupils of the late Dr. Smith, as a memorial of his services as professor in the College of Physicians and Surgeons from 1826 to 1866. Under the provisions of the trust, an annual prize of *one hundred dollars* is awarded for the best essay (if sufficiently meritorious) on the subject of the year, presented by an alumnus of this

college. The competing essay should be sent to the president of the college on or before March 10th, each essay signed with a device or motto, and accompanied by a sealed envelope, inscribed with the same device or motto, and containing the name of the author. The envelope of the successful essayist will be opened, and the prize awarded, at the annual commencement next following.

EXPENSES

All Fees are Payable in Advance

Drafts and checks should be made payable to the Registrar.

The necessary expenses for graduation in medicine, for a student who attends the four-years' curriculum, are as follows :

First Year

Matriculation	\$ 5
Fee for all the required exercises of the year	200
Anatomical material, \$1 each part.	

Second Year

Fee for all the required exercises of the year	\$200
Anatomical material, \$1 each part.	

Third Year

Fee for all the required exercises of the year	\$200
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Fourth Year

Fee for all the required exercises of the year, including electives	\$200
Examination fee	25

Fees for Special Students, 1895-96

Didactic lectures from each of the seven chairs of (1) Anatomy, (2) Materia Medica and Therapeutics, (3) Obstetrics and Gynecology, (4) Physics and Chemistry, (5) Physiology, (6) Practice of Medicine and Neurology, (7) Surgery	\$20
Dissection	10
Dissecting material, per part	1
Practical chemistry, including chemicals and breakage, per course	25
Practical toxicology, per course	15
Laboratory course in normal histology, including materials	25
Laboratory course in pathology and pathological histology, including materials	25
Laboratory fee for special instruction in pathology or histology or bacteriology, per month	25
Operative surgery on the cadaver, including material, per course	20

For other special courses the fees must be specially arranged with the instructors.

The clinical lectures at the VANDERBILT CLINIC are free to matriculates who do not take the regular curriculum.

The public clinical lectures, and demonstrations of pathological anatomy, which are given at the hospitals by officers of the college, are free to matriculates.

BOARD

Information in regard to board can be obtained from the secretary of the Students' Movement, through the Registrar, Mr. E. T. Boag, at his office in the college. Prices range from \$5 to \$9 per week.

CORRESPONDENCE

Letters requesting information should be addressed to Edwin B. Cragin, M.D., Assistant Secretary of the Faculty, 437 West Fifty-ninth Street, New York.

ADMISSION

1. Applicants for matriculation who declare themselves in writing not to be candidates for the degree of Doctor of Medicine from this college are admitted, without further formality, to matriculation as special students. Such applicants cannot subsequently become candidates for graduation at this college without full compliance with the terms of admission and graduation as set forth in this catalogue.

2. To all persons who matriculate with the intention of becoming candidates for the degree of doctor of medicine *at any medical school in the State of New York*, the following provisions of law are now applicable, viz. :

LAWS OF NEW YORK, 1893, CHAPTER 661, § 145 (IN PART)

"The degree of bachelor or doctor of medicine shall not be conferred in this State before the candidate has filed with the institution conferring it, the certificate of the Regents that *three years before the date of the degree, or before or during his first year of medical study in this State*, he had either graduated from a registered college or satisfactorily completed not less than a three-years' academic course in a registered academy or high school ; or had a preliminary education considered and accepted by the Regents as fully equivalent ; or had passed Regents' examinations in **Arithmetic, Elementary English, Geography, Spelling, United States History, English Composition, and Physics**. Students who had matriculated in a New York medical school before June 5, 1890, shall be exempt from this preliminary education requirement, provided the degree be conferred before August 1, 1895."

Every person to whom this law applies, must, in pursuance thereof, before he can be admitted to final examination for the degree of M.D., file with the

Secretary of the Faculty a MEDICAL STUDENT'S CERTIFICATE OF THE REGENTS OF THE UNIVERSITY OF THE STATE OF NEW YORK.

The conditions to be fulfilled in order to obtain this certificate are as follows :

A—Certificates without Examination

Candidates for a medical student's certificate having credentials which can be accepted in place of an examination under the act, must send their credentials to "UNIVERSITY EXAMINATION DEPARTMENT, ALBANY, N. Y." They will be examined and returned at once, and, if accepted, a medical student certificate will be sent with them.

The credentials, besides those referred to in the law, which the Regents accept in the place of an examination under the act, may be ascertained by written application addressed to "UNIVERSITY EXAMINATION DEPARTMENT, ALBANY, N. Y."

B—Examinations under the Act

Candidates should notify the Regents' office at Albany, at least ten days in advance, stating at what time and in what studies they must be examined. They will at once be assigned the most convenient time and place.

Any person who does not obtain a medical student's certificate without examination, according to section A, must pass the examinations named in the law, or their equivalents, as allowed by the Regents, and referred to under section A.

The times, places, and subjects to these examinations are set forth below.

On the dates specified, examinations will be held entirely under the charge of the Regents.

CALENDAR OF REGENTS' EXAMINATIONS FOR MEDICAL STUDENT CERTIFICATES 1895-96.

SUBJECTS—*Arithmetic, Elementary English, Geography, Spelling, United States History, English Composition, and Physics.*

TIMES AND PLACES.

1895.	
SEPTEMBER 24-26..	New York, Albany, Syracuse, Buffalo.
1896.	
JANUARY 27-31....	New York and about 400 academies and high schools.
MARCH 23-27.....	New York and about 400 academies and high schools.
JUNE 15-19.....	New York and about 425 academies and high schools.

These examinations must be passed during or prior to the first year of medical study in the State of New York.

GRADUATION

(See also "License to Practise Medicine," below.)

Every candidate in the four-years' course will be required, before admission to the degree of M.D. :

1. To present satisfactory evidence, as required by law, of good moral character, and of having attained the age of twenty-one years.

2. To present a "Medical Student Certificate of the Regents of the University of the State of New York," as the evidence of preliminary education required by law (see page 46).

3. To have attained to satisfactory standing in the required studies of the four years of the curriculum, including the elective course or courses chosen for the fourth year.

4. A candidate who shall have been admitted to advanced standing will be required to have spent not less than four academic years at the studies referred to in the clause next preceding; and to have complied successfully with the requirements for admission to advanced standing set forth on page 15.

No two academic years which shall have begun during the same calendar year will be held to satisfy the requirements of the present clause.

THE DEGREE OF MASTER OF ARTS

The degree of Master of Arts may be conferred upon students holding college degrees, who shall have completed with distinction the entire course of the School of Medicine, provided that in each case the candidate present a satisfactory dissertation, and that at least a part of the extra work required of him for the degree of Master of Arts be taken under the direction of the Faculty of Philosophy, Political Science, or Pure Science, to the extent of one minor course, for not less than one year.

LICENSE TO PRACTISE MEDICINE

The following extracts from the act regulating the practice of medicine in the state of New York are printed for the information of such graduates and students as may intend to practise medicine in this state :

Laws of New York, 1893, ch. 661

Previous laws relating to the practice of medicine were repealed May 9, 1893, when this new law took effect.

* * * * *

§ 141 STATE BOARDS OF MEDICAL EXAMINERS—There shall continue to be three separate state boards of medical examiners of seven members each, each of whom shall hold office for three years from August 1 of the year in

which appointed. One board shall represent the Medical Society of the State of New York, one the Homœopathic Medical Society of the State of New York and one the Eclectic Medical Society of the State of New York. Each of these three societies shall at each annual meeting nominate twice the number of examiners to be appointed in that year on the board representing it. The names of such nominees, shall be annually transmitted under seal by the president and secretary prior to May 1 to the regents, who shall, prior to August 1, appoint from such lists the examiners required to fill any vacancies that will occur from expiration of term on August 1.

§ 145 ADMISSION TO EXAMINATION—The regents shall admit to examination any candidate who pays a fee of \$25 and submits satisfactory evidence, verified by oath if required, that he :

(1) Is more than twenty-one years of age ; (2) is of good moral character ; (3) has the general education required in all cases after August 1, 1895 preliminary to receiving the degree of bachelor or doctor of medicine in this state¹; (4) has studied medicine not less than three full years, including three satisfactory courses, in three different academic years, in a medical school registered as maintaining at the time a satisfactory standard ; (5) has either received the degree of bachelor or doctor of medicine from some registered medical school, or a diploma or license conferring full right to practise medicine in some foreign country.

* * * * *

The regents may in their discretion accept as the equivalent for any part of the third and fourth requirement, evidence of five or more years' reputable practice of medicine, provided that such substitution be specified in the license.

§ 146 QUESTIONS—Each board shall submit to the regents, as required, lists of suitable questions for thorough examination in anatomy, physiology and hygiene, chemistry, surgery, obstetrics, pathology and diagnosis, and therapeutics including practice and materia medica. From these lists the regents shall prepare question papers for all these subjects, which at any examination shall be the same for all candidates, except that in therapeutics, practice and materia medica all the questions submitted to any candidate shall be chosen from those prepared by the board selected by that candidate, and shall be in harmony with the tenets of that school as determined by its state board of medical examiners.

§ 147 EXAMINATIONS AND REPORTS—Examinations for license shall be given in at least four convenient places in this state and at least four times annually, in accordance with the regents' rules, and shall be exclusively in writing and in English. Each examination shall be conducted by a regents' examiner, who shall not be one of the medical examiners. At the close of each examination the regents' examiner in charge shall deliver the questions and answer papers to the board selected by each candidate, or to its duly authorized committee,

¹ See ADMISSION, page 46.

and such board, without unnecessary delay, shall examine and mark the answers and transmit to the regents an official report, signed by its president and secretary, stating the standing of each candidate in each branch, his general average and whether the board recommends that a license be granted. Such report shall include the questions and answers and shall be filed in the public records of the University. If a candidate fails on first examination, he may after not less than six months' further study, have a second examination without fee.

If the failure is from illness or other cause satisfactory to the regents they may waive the required six months' study.

§ 148 LICENSES—On receiving from a state board an official report that an applicant has successfully passed the examinations and is recommended for license, the regents shall issue to him, if in their judgment he is duly qualified therefor, a license to practise medicine. Every license shall be issued by the University under seal and shall be signed by each acting medical examiner of the board selected and by the officer of the University who approved the credential which admitted the candidate to examination, and shall state that the licensee has given satisfactory evidence of fitness as to age, character, preliminary and medical education and all other matters required by law, and that after full examination he has been found properly qualified to practise. Applicants examined and licensed by other state examining boards registered by the regents as maintaining standards not lower than those provided by this article, and applicants who matriculated in a New York state medical school before June 5, 1890, and who received the degree M.D., from a registered medical school before August 1, 1895, may without further examination, on payment of \$10 to the regents and on submitting such evidence as they may require, receive from them an indorsement of their licenses or diplomas conferring all rights and privileges of a regents' license issued after examination.

* * * * *

§ 149 REGISTRY—Every license to practise medicine shall, before the licensee begins practice thereunder, be registered in a book kept in the clerk's office of the county where such practice is to be carried on, with name, residence, place and date of birth, and source, number and date of his license to practise. Before registering, each licensee shall file, to be kept in a bound volume in the county clerk's office an affidavit of the above facts, and also that he is the person named in such license, and had, before receiving the same, complied with all requisites as to attendance, terms and amount of study and examinations required by law and the rules of the University as preliminary to the conferment thereof; that no money was paid for such license, except the regular fees paid by all applicants therefor; that no fraud, misrepresentations or mistake in any material regard was employed by any one or occurred in order that such license should be conferred. Every license, or if lost, a copy thereof legally certified so as to be admissible as evidence, or a duly attested transcript of the record of its conferment shall, before registering, be exhibited to the county clerk, who, only in case it was issued or indorsed as a license under seal by the

Amended by 127 in 1895

Candidates for advanced standing will please to write "advanced standing" after their signatures.

Such candidates will omit question No. 6.

1. Whence does the living body derive its daily supply of potential chemical energy ?

2. Name the neutral fats, and state which has the lowest and which the highest melting point.

3. Give the differences between blood-plasma and blood-serum.

4. Why does the serum of blood at times look milky ?

5. How is the ascent of the diaphragm produced in expiration ?

6. Describe the demonstration which you have seen of the action of the diaphragm.

7. Describe the experiment which most clearly proves the presence of a "respiratory centre" in the brain.

8. Give the principal *physiological* properties of each of the three coats of the arterioles.

9. Why is each stroke of the pulse felt, on examination, to occur later in the foot than in the neck ?

10. Describe the movements of the stomach during digestion, and their effects upon the contents of the organ.

11. Upon what does the acidity of fresh normal human urine usually depend ?

12. Give the proximate principles which may occur as spontaneous deposits from fresh normal human urine, and state the conditions under which each deposit occurs.

Fall, 1895.

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